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ABSTRACT

A study was designed to investigate the nature of language proficiency and its cross-lingual dimensions. The focus of the study was on the interdependence hypothesis, that older immigrant students whose first language (L1) cognitive/academic proficiency is better developed on arrival in Canada will acquire English cognitive/academic skills more rapidly than younger immigrant students. The sample was comprised of Japanese children attending grades 2, 3, 5, and 7 of the School of Supplementary Japanese Studies in Toronto and of 45 recently arrived Vietnamese students between the ages of 9 and 17 years. Group and individual testing was done in both native language and English. Results are described separately for Japanese and Vietnamese studies. Data analyses supported the hypothesis that L1 cognitive/academic proficiency would account for a highly significant proportion of variance in second language (L2) proficiency. The data suggest that younger immigrant children tend to replace L1 as they acquire L2, whereas older children tend to add L2. With regard to the nature of language proficiency, findings suggest that L1 and L2 interactional style are interdependent because both are manifestations of personality attributes of the individual and of the same underlying cognitive/proficiency. (AMH)

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Linguistic Interdependence Among Japanese and Vietnamese Immigrant Students

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FINAL REPORT

January 1982

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FOREWORD

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I. BACKGROUND

This study was designed to investigate the nature of language proficiency and its cross-lingual dimensions. The background context of the study is the ongoing debate about the rationale for bilingual education in the United States and the appropriacy of present procedures for assessing language proficiency among minority students for entry and exit purposes.

Language Proficiency and the Rationale for Bilingual Education

It is frequently argued in opposition to bilingual education in the United States that if language minority students are deficient in English they they need intensive instruction in English. Attempting to remedy English language deficiencies through instruction in students' first language (L1) appears counter-intuitive to many policy-makers and educators. The implicit theoretical assumption underlying this position has been labelled the "Separate Underlying Proficiency" (SUP) model of bilingualism, in that proficiency in L1 and L2 are assumed to be separate (Cummins, 1981a). This position is contrasted with the "Common Underlying Proficiency (CUP) model of bilingualism in which cognitive/academic aspects of L1 and L2 proficiency are assumed to be interdependent, i.e. strongly related to one another. The implication for bilingual education is that if L1 and L2 proficiency are manifestations of a common underlying proficiency, then instruction in either language is, theoretically, capable of promoting the proficiency underlying academic skills in both languages.

Cummins (1981a) has reviewed data from five areas which are consistent with the interdependence hypothesis. These areas are 1. evaluations of bilingual education programs; 2. studies relating age to L2 acquisition; 3. investigations

of the use of L1 in the home context when L2 is the language of schooling; 4. correlational studies of the relationship between L1 and L2; 5. experimental studies of bilingual information processing.

The present study was designed to investigate the interdependence hypothesis among Japanese and Vietnamese immigrant students in Toronto, Canada. According to the interdependence hypothesis older immigrant students whose L1 cognitive/academic proficiency is better developed on arrival in Canada will acquire English cognitive/academic skills more rapidly than younger immigrant students. Thus, we examined how rapidly different aspects of English communicative and cognitive/academic proficiency were acquired by Japanese and Vietnamese immigrant students as a function of their level of L1 proficiency and age on arrival in Canada. The use of Japanese and Vietnamese immigrant students provides a stringent test of the interdependence hypothesis because of the considerable differences between English and these two languages. Also, the generalizability of the hypothesis is tested by the use of two groups of students with very different background characteristics, namely, upper-middle class Japanese students and Vietnamese refugee students.

Thus, although the study does not investigate bilingual education directly, it does test a hypothesis which is central to the rationale for bilingual education. The study is also directly relevant to current issues in language proficiency assessment in bilingual education. In order to understand these issues the relationship between language proficiency and academic achievement must be considered in some detail.

Language Proficiency and Academic Achievement

It has been argued (Cummins, 1981a, 1982) that a major reason for the confused state of the art of language proficiency assessment in bilingual programs (and indeed for the confusion surrounding the rationale for bilingual education) stems from the failure to develop an adequate theoretical framework for relating language proficiency to academic achievement. Without such a theoretical framework it is impossible either to develop rational entry and exit criteria for bilingual programs or to design testing procedures to assess these criteria. The consequences of the present theoretical vacuum are apparent from a brief survey of assessment issues in bilingual education.

A cursory examination of the many tests of language proficiency and dominance currently available for assessing bilingual students (see, e.g., DeAvila & Duncan, 1978; Dieterich, Freeman and Crandell, 1979) reveals enormous variation in what they purport to measure. Of the 46 tests examined by DeAvila and Duncan (1978), only four included a measure of phoneme production, 43 claimed to measure various levels of lexical ability, 34 included items assessing oral syntax comprehension and nine attempted to assess pragmatic aspects of language.

This variation in language tests is not surprising in view of the lack of consensus as to the nature of language proficiency or "communicative competence". For example, Hernandez-Chavez, Burt and Dulay (1978) have outlined a model of language proficiency comprising 64 separate components, each of which, hypothetically at least, is independently measurable. By contrast, Oller and Perkins (1980) have argued that

> "a single factor of global language proficiency seems to account for the lion's share of variance in a wide variety of educational tests including nonverbal and verbal IQ measures, achievement batteries, and even personality inventories and affective measures... the results to date are...preponderantly in favor of the assumption that language skill pervades every area of the school curriculum even more strongly than was ever thought by curriculum writers or testers" (p.1).

This global dimension is not regarded by Oller (1981) as the only significant factor in language proficiency, but the amount of additional variance accounted for by other factors is relatively modest.

The considerable evidence that Oller and his colleagues (e.g. Oller & Streiff, in press) have assembled to show that academic and cognitive variables are strongly related to at least some measures of all four general language skills (listening, speaking, reading, and writing) raises an important issue for the assessment of entry and exit criteria in bilingual programs: to what extent should measures of language proficiency be related to measures of academic achievement? In other words, to what extent does the construct of language proficiency overlap with the constructs of "intelligence" and academic achievement ?

This theoretical question has rarely been asked; instead, researchers have either asked only the empirical question of how language proficiency is related to achievement (often expressed in terms of the relation between "oral language" and reading) or else ignored the issue entirely, presumably because they do not consider it relevant to language proficiency assessment in bilingual education. However, the theoretical issue

cannot be avoided. The relationship of language proficiency to academic achievement must be considered in view of the fact that a central purpose in assessing minority students' language dominance patterns is to assign students to classes taught through the language in which it is assumed they are most capable of learning, and in which they will most readily acquire academic skills. If measures of language proficiency bear no relationship to students' acquisition of academic skills their relevance in the context of entry and exit criteria is open to question. This issue requires theoretical resolution rather than empirical because some language measures correlate highly with achievement while others show a negligible relationship (Rosansky, in press; Ulibarri, Spencer & Rivas, 1981); without a theoretical framework within which language proficiency can be related to the development of academic skills there is no basis for choosing between alternative tests which are clearly measuring very different things under the guise of "language proficiency".

Essentially, what is at issue are the criteria to be used in determining the validity of language proficiency measures in the specific context of bilingual education. Whether we are talking about content, criterion-related, construct, face, or ecological validity, our procedures for determining validity are always based on a theory regarding the nature of the phenomenon being measured. In many cases, however, this theory has remained implicit in language test development for bilingual students and, where the theory has been made explicit, the construct of language proficiency has usually been regarded as independent of the constructs of intellectual and academic abilities.

Thus, it is reported (see Oakland, 1977, p. 199) that on the Basic Language Competence Battery there is little or no increase in scores across the elementary grades among native speakers. This is interpreted as evidence for the construct validity of the battery in that it is indeed measuring "language knowledge" rather than intellectual abilities or educational achievement. In arguing against "language deficit" theories, many sociolinguists (e.g. Labov, 1970; Shuy, 1977) have similarly asserted that language proficiency is independent of cognitive and academic performance. Shuy (1977, p.5), for example, states that "rather compelling evidence rejects every claim made by those who attempt to show linguistic correlates of cognitive deficit".

One apparent implication of the theoretical position that "language proficiency" is independent of intellectual abilities and academic achievement is that language measures such as the integrative tests (e.g. oral cloze, dictation, elicited imitation) used in the research of Oller and others (see Oller & Perkins, 1980; Oller & Streiff, in press) would have to be rejected as invalid to assess the construct of "language proficiency" because of their strong relationships to achievement and IQ.

Many theorists would regard any form of contrived test situation as inadequate to assess language proficiency, arguing instead for procedures which assess children's language in naturally-occurring communicative situations (e.g. Cazden, Bond, Epstein, Matz, & Savignon, 1977; Dieterich et al., 1979). For example, Dieterich et al. argue

in relation to an elicited imitation task that "it mirrors no real speech situation and is thus of questionable validity in assessing proficiency" (1977, p. 541).

Although the requirement that proficiency measures reflect "natually-occurring speech situations" is a basic principle of validity for many theorists, few pursue the issue to inquire whether or not the communicative demands of natural face-to-face situations are identical to the communicative demands of classroom situations. In classrooms, students' opportunity to negotiate meaning with the interlocutor (teacher) is considerably reduced as a result of sharing him or her with about 25-30 other students and there is considerable emphasis on developing proficiency in processing written text where the meaning is supported largely by linguistic cues rather than the richer "real-life" cues of face-to-face communication. represents a central component of the theoretical framework within which the present study was conducted.

A Theoretical Framework

Many educators assume that because students can cope adequately with the communicative demands of face-to-face situations and may appear quite fluent in English, therefore their English proficiency is sufficiently well-developed to cope with the communicative demands of the regular English-only curriculum on an equal basis with native English-speaking students. There is considerable evidence to suggest that this logic is

false. Bilingual programs which have been successful in developing a high level of English academic skills in language minority students have usually maintained instruction in L1 throughout elementary school. Usually it is only in the latter grades of elementary school that students approach grade norms in English reading skills (see Cummins, 1981a for a review). In a similar way, it has been shown (Cummins, 1981b) that it took immigrant students who arrived in Canada after the age of six, 5-7 years on the average, to approach grade norms in academically-related aspects of English proficiency. Thus, it clearly takes considerably longer for language minority students to develop age-appropriate academic skills in English than it does to develop certain aspects of age-appropriate English face-to-face communicative skills. It follows that students exited on the basis of teacher judgements or language tests which primarily assess face-to-face communicative skills are likely to experience considerable academic difficulty in an English-only program, and many will manifest the well-documented pattern of cumulative deficits.

The need to distinguish between rapidly acquired aspects of face-to-face communicative proficiency and those aspects of proficiency required to meet academic demands was initially expressed in terms of a distinction between "basic interpersonal communicative skills" (BICS) and "cognitive-academic language proficiency" (CALP) (Cummins, 1979). This distinction was later integrated into a more comprehensive framework (Cummins 1981a, 1982, Swain in press) which was designed to allow the developmental

relationships between academic performance and communicative proficiency in both L1 and L2 to be considered.

The framework presented in Figure 1 proposes that in the context of bilingual education in the United States communicative or language proficiency can be conceptualized along two continuums. First is a continuum relating to the range of contextual support available for expressing or receiving meaning. The extremes of this continuum are described in terms of "context-embedded" versus "context-reduced" communication. They are distinguished by the fact that in context-embedded communication the participants can actively negotiate meaning (e.g. by providing feedback that the message has not been understood) and the language is supported by a wide range of meaningful paralinguistic and situational cues; context-reduced communication, on the other hand relies primarily (or at the extreme of the continuum, exclusively) on linguistic cues to meaning and may in some cases involve suspending knowledge of the "real world in order to interpret (or manipulate) the logic of the communication appropriately.

The vertical continuum is intended to address the developmental aspects of communicative proficiency in terms of the degree of active cognitive involvement in the task or activity. Cognitive involvement can be conceptualized in terms of the amount of information that must be processed simultaneously or in close succession by the individual in order to carry out the activity.

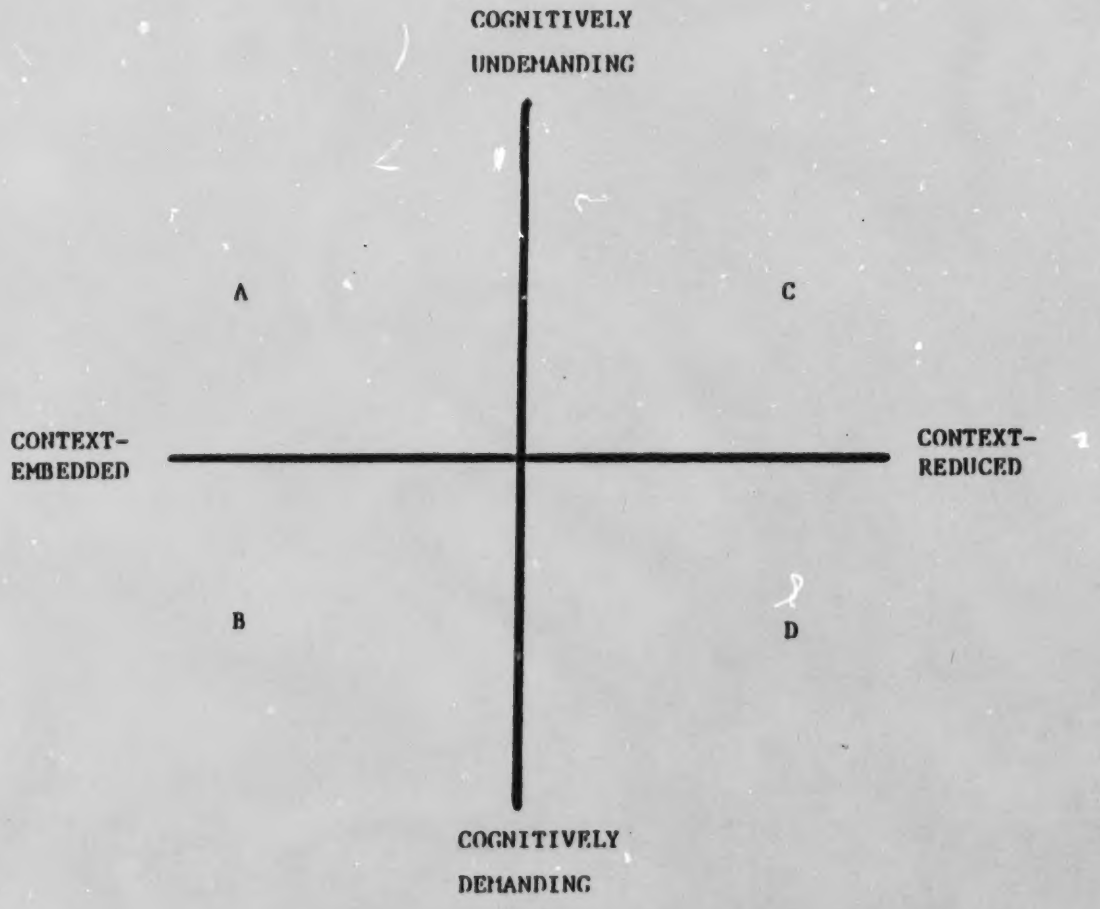

Figure 1. Range of Contextual Support and Degree of Cognitive Involvement in Communicative Activities

The upper part of the vertical continuum consists of communicative tasks and activities in which the linguistic tools have become largely automatized (mastered) and thus require little active cognitive involvement for appropriate performance. At the lower end of the continuum are tasks and activities in which the communicative tools have not become automatized and thus require active cognitive involvement. Persuading another individual that your point of view rather than her/his is correct, or writing an essay on a complex theme are examples of such activities. In these situations, it is necessary to stretch one's linguistic resources (i.e. grammatical, sociolinguistic, discourse and strategic competencies) to the limit in order to achieve one's communicative goals. Obviously, cognitive involvement, in the sense of amount of information processing, can be just as intense in context-embedded as in context-reduced activities.

As mastery is developed, specific linguistic tasks and skills travel from the bootom towards the top of the vertical continuum. In other words, there tends to be a high level of cognitive involvement in task or activity performance until mastery has been achieved or, alternatively, until a plateau level at less than mastery levels has been reached (e.g. L2 pronunciation in many adult immigrants, "fossilization" of certain grammatical features among French immersion students, etc.). Thus, learning the phonology and syntax of L1, for example, requires considerable cognitive involvement for the two and three year old child, and therefore these tasks would be placed in quadrant B (context-embedded, cognitively demanding). However, as mastery of these skills develops, tasks involving them would move from quadrant B to quadrant A since performance becomes increasingly automatized and cognitively undemanding. In a second language context the same type of developmental progression occurs.

In terms of this framework, the relevant issues for the present study are: 1. What is the relationship between context-reduced aspects of L1 and L2? 2. To what extent can context-reduced aspects of communicative proficiency be distinguished from context-embedded aspects in both L1 and L2? 3. To what extent are the acquisition of context-reduced and context-embedded proficiencies among immigrant students determined by different sets of factors?[1]

It remains to review previous investigations of the relationships between L1 proficiency, age on arrival and acquisition of L2 among immigrant students.

Age, L1 Proficiency and L2 Acquisition

Recent reviews of research on the relationship between age and L2 acquisition support the interdependence hypothesis insofar as older learners, who are more cognitively mature and whose L1 proficiency is better developed, appear to acquire cognitively-demanding aspects of L2 proficiency more rapidly than younger learners (Cummins, 1981b; Ekstrand, 1978; Genesee, 1978; Krashen, Long & Scarcella, 1979). The only areas where research suggests older learners may not have an advantage are accent (Oyama, 1976) and free oral production (Ekstrand, 1978) which, significantly, appear to be among the least cognitively-demanding aspects of both L1 and L2 proficiency. In terms of the model presented in Figure 1, we would expect the advantage of older learners to be especially apparent in context-reduced aspects of L2 proficiency, because of their greater amount of experience in processing context-reduced aspects of L1. The extent of the advantage associated with age can be seen from the findings of a reanalysis of data from

the Toronto Board of Education involving over 1200 immigrant students (Cummins, 1981b). It was possible to make 90 comparisons between older and younger L2 learners on context-reduced cognitively-demanding aspects of L2 and in 89 of these older learners performed better.

Skutnabb-Kangas and Toukomaa (1976) also report that among Finnish immigrant children in Sweden, the extent to which L1 academic skills had been developed prior to contact with Swedish was significantly related to how well Swedish academic skills were developed. Children who migrated at age 10-12 maintained a level of Finnish close to Finnish students in Finland and achieved Swedish language skills comparable to those of Swedes. By contrast, children who migrated at younger age levels or who were born in Sweden tended to reach a developmental plateau at a low level in both Finnish and Swedish academic proficiency.

Consistent with the Skutnabb-Kangas and Toukomaa findings, there is considerable anecdotal evidence that immigrant students from Mexico fare better educationally than native-born Mexican Americans. Troike (1978), for example, stated that "it is a common experience that ... children who immigrate to the United States after grade six ... rather quickly acquire English and soon outperform Chicano students who have been in the United States schools since grade one" (p.21). Based on a survey of school personnel in four southwestern states, Carter (1970) similarily reported that many teachers and administrators believed that older immigrant students achieved better than native-born Chicano students.

In a study involving 91 limited English proficient students, Connor (1981) reported that present grade level was the best predictor of English reading skills. Grade level was interpreted to include the age of the students as well as L1 reading skills acquired prior to immigration or in non-ESL classes. Length of residence was not found to exert a significant effect in this study, a finding which was attributed to the rapid progress of recently-arrived Vietnamese students in comparison to the relatively slower progress of Spanish-background students whose length of residence was longer.

Nomoto (1966) conducted a questionnaire survey on 125 Japanese children residing in London, England. Parents were asked to give subjective evaluations of their children's competence in both Japanese and English in six areas of language skills: speaking, hearing, reading, writing, counting and thinking. Nomoto tried to determine the relevance of the children's age on arrival, length of residence, and home-language use on English and Japanese. Some of his findings were: (a) Reading and writing skills in Japanese rapidly drop as children's period of residence becomes longer; (b) Among the six areas, counting shows most clearly the shift of language competence from L1 (Japanese) to L2 (English). For the children who have already reached the age of eight before extensive exposure to L2, counting remains as the strongest area in Japanese, whereas for the children who were below eight at the time of entry, counting is the weakest of the Japanese language areas; (c) Children's L2 becomes stronger than L1 when their period of stay extends longer than 2½ years; (d) Japanese parents on the whole easily lose control over their children's home language. When they remain in London more than 2½ years, 50% of the children use L2 even with parents and 69% of them use L2 among brothers and sisters.

As for the arrival age, a child who is older than ten is the least affected in terms of Japanese retention but for the school child who is less than six on arrival, the degree of retention of Japanese as home language is less than 50%. These findings are consistent with Skutnabb-Kangas and Toukomaa (1976) in suggesting that age on arrival is related to L1 retention and development.

A recent study of adult Hmong refugees in South East Asian camps in which it was possible to separate the effects of L1 literacy and previous formal education on the learning of English in a formal classroom setting also supports the interdependence hypothesis (Robson, 1981). It was found that both previous formal education and literacy in Hmong independently predicted progress in learning English. Students who had neither L1 literacy nor formal education learned little or no English (oral or written) from the formal classroom experience.

In summary, the research data suggest that the acquisition of L2 cognitive/academic skills is partially a function of L1 cognitive/academic skills, as predicted by the interdependence hypothesis. However, although the interdependence hypothesis has been useful in interpreting previous findings on a post hoc basis, the present study is the first formal test of the hypothesis.

The specific research issues to which the study was addressed are summarized below:

1. To what extent is the acquisition of L2 cognitive/academic proficiency a function of immigrant students' L1 cognitive/academic proficiency on arrival in Canada?

2. What is the relationship between level of L1 proficiency on arrival and continued development of L1?

3. How are academic aspects of L1 and L2 communicative proficiency related to other dimensions of communicative proficiency?

4. What is the influence of different background (e.g. personality characteristics, parental education) and behavioral (e.g. language use patterns) variables on the acquisition of English proficiency and maintenance of L1 proficiency?

Our investigation of the interdependence hypothesis (question 1) differed in important respects from our investigation of the latter three questions insofar as we attempted to formally test predictions derived from the interdependence hypothesis whereas our approach to the other issues was essentially exploratory; in other words, for these issues our aim was to generate, rather than formally test hypotheses.

II. RESEARCH METHODOLOGY

Subjects

(a) Japanese Sample. All parents of children in the Japanese sample were "temporary residents" who were in Canada for job-related reasons and who intended eventually to return to Japan. Thus, there was a high degree of motivation to maintain and develop children's Japanese proficiency. Parents were generally conscious of the reentry problem their children faced upon return to Japan where many of the well-established schools require extremely competitive entrance examinations prior to grades 1, 7 and 11.[2]

Children were attending grades 2 and 3 and grades 5 and 7 of the School of Supplementary Japanese Studies in Toronto. The school is intended for temporary residents and attempts to cover the Japanese curriculum in just one day a week (Saturdays 9 a.m. - 2.35 p.m.). Naturally, in order to meet this

aim a considerable amount of homework is prescribed. Detailed information about the characteristics of the Japanese families was obtained by means of the parent interview and is described in Appendices 1, 6 and 7.

The original sample of 91 students represented all the grades 2,3,5 and 6 students whose parents consented to allow them to participate in the study. Permission to participate was facilitated by the fact that the study addressed an issue which was of concern to parents and many were aware of Professor Nakajima's close contacts with the school and with the Toronto Japanese community in general. The group-administered English and Japanese academic language proficiency measures were given to this original sample. From this sample 59 (32 male, 27 female) were administered the individual English academic measures and Japanese and English interviews. The subsample was selected in such a way that LOR and sex distributions would be as similar as possible in older and younger groups.

(b) Vietnamese Sample. School district records had suggested that there was an adequate number of Vietnamese L1 students enrolled in the district for our purposes. However, when we began to interview students we discovered that although Vietnamese was their dominant language (as a result of schooling) and had been entered as "first language" in the school board computer, for many students Cantonese was their L1. Thus, our potential sample dwindled and we eventually tested only 45 students, 33 male and 12 female. It was possible to administer the English individual interview to 39 of these students.

All the Vietnamese students in the sample were recent arrivals, the range being 5 - 22 months. The median age of the sample was 158 months with a range of 110-208 months. We chose students between the ages of 9 and 17 years because we wanted to ensure that our sample had received some education in Vietnamese. Because of the fact that refugees often spent considerable periods of time in transit camps, a younger sample might have had little opportunity to develop Vietnamese literacy skills.

Data Collection Procedures

(a) Japanese Study. Although the School of Supplementary Japanese Studies was extremely cooperative in facilitating the selection of students, it was naturally unwilling to permit students to be tested during the limited class-time available to achieve their objectives. Since students lived in all areas of the city, testing during regular school hours was similarly infeasible. Thus, the original sample was tested in late June and early July after regular Canadian school had started summer holidays. Testing was carried out in two locations (O.I.S.E. and a public school) and parents brought their child(ren) to the location most convenient to their homes. Five two-hour sessions were required to test all 91 students. Grade 2 and 3 students were tested in a different room from that of the grade 5 and 6 students. English and Japanese testing were separated by a short break for refreshments.

The subsample was selected during the summer and individual interviews with children and parents took place during September and October. Interviews were conducted in students' homes after regular school hours or on weekends. Two Japanese graduate assistants carried out the Japanese interviews while all English interviews

were carried out by the same research officer (Daina Green). In some cases all three interviewers were involved in the home visits but usually both parent and child interview was carried out by just one of the Japanese assistants.

All parent interviews were conducted in Japanese. Parents (almost invariably the mother) were provided with a form on which they filled in the more factual information with guidance from the graduate assistant. In some cases it turned out to be more efficient for the assistant to interview the parent and fill in the information herself. However in all cases the assistant was available to clarify and discuss the intention of the questions.

The English interviews with the children were conducted and recorded usually in a separate room while the parent was being interviewed in Japanese. Then the children were interviewed in Japanese. Sometimes siblings were present and every effort was made to maintain an informal relaxed atmosphere. Some time was always spent in informal conversation with parent and child before any interviewing began. Interviews lasted usually about 15-20 minutes.

(b) Vietnamese Study. Because of the relatively small number of "genuine" Vietnamese L1 students in the North York school system, we were forced to avail ourselves of all students in the target age range, regardless of school or home location. Thus, it was not feasible to test during regular school hours because of the small number of students in any one school, and so groups of students (usually 5-10 at a time) were "ferried" to a central location (either O.I.S.E. or the North York Board of Education offices) for group testing and, in some cases, interviews.

Group tests were given in both languages but individual interviews were conducted in English only by the same interviewer as in the Japanese study. (All children were recent arrivals and therefore fluent in Vietnamese.) The English interviews were briefer than in the Japanse study and most were conducted in children's homes several weeks after the group testing session. During the testing sessions children were provided with lunch and refreshments and most appeared to enjoy the experience. Between two and four adults were present at the testing sessions and we tried to keep the ratio of children to adults at about 3 or 4: 1.

Independent and Dependent Variables

(a) Japanese Study. The English and Japanse proficiency variables which were derived from both the formal tests and interviews will first be described followed by the variables from the parent interview. The formal tests were intended to tap the construct of context-reduced (academic) language proficiency while the interviews were designed to yield information on context-embedded language proficiency.

Japanese Academic Language Proficiency. Because the major aim of the School of Japanese Supplementary Studies is to develop the Japanese academic skills of expatriate children to a level commensurate with scholastic expectations in Japan, we felt that it was appropriate to use a standardized test of reading skills normed on Japanese school children. The test we chose was the Diagnostic Test of Reading Comprehension and Reading Proficiency Level I (Grades 1,2,3), and Level II (Grades 4,5,&6) developed by Tatsumi (1968). The test is designed to provide a diagnostic assessment of reading skills from grade 1 through 6. The subtests in the two levels of the test are outlined in the following chart:

	I (Grades 1, 2, 3)	II (Grades 4, 5, 6)
Reading Comprehension	A. Comprehension of Simple Sentences B. Reading Comprehension B1 Context B2 Theme B3 Understanding in detail	A. Reading Comprehension A1 Context A2 Theme A3 Detail
Vocabulary	C. Word Meaning C1 Meaning C2 Usage	B. Usage
Chinese Characters	D. Recognition of Chinese Characters	C. Recognition of Chinese Characters
Criticism		D. Critical Reading D1 Criticism D2 Appreciation

The only modification that was made in the administration of the test was that the print size on the Level I test was made larger (through photocopying techniques), with the publisher's permission, because it was felt to be somewhat small for the younger immigrant students.

Subtest raw scores were summed and converted to T scores ($\bar{X}$ = 50, S.D. = 10) according to test norms. It was not possible to use subtest scores because different subtests (Levels I and II) were administered to younger and older students. An advantage to using T scores is that they are directly comparable to scores of equivalent grade level students in Japan. However, a disadvantage in the present context, is that variance directly due to age is removed when scores are expressed in relation to grade norms. Thus, this variable does not reflect differences in Japanese academic proficiency which would be expected (in absolute terms) between grades 5/6 and grades 2/3 students.

An examination of the test content shows that it is intended to assess equivalent literacy-related skills to those assessed by typical standardized English reading achievement measures. In terms of the theoretical framework outlined in Figure 1 these skills are context-reduced and cognitively-demanding (quadrant D).

English Academic Language Proficiency. The English academic measures consisted of the Gates McGinitie grade 2 Vocabulary and Reading tests, a written Prepositional Usage Test (Wright & Ramsey, 1970) and orally administered adaptations of the Antonyms and Sentence Repetition subtests of the Language Assessment Umpire (LAU) (Cohen, 1980). The Gates McGinitie test was chosen on the basis of considerable data showing strong relationships between reading and vocabulary knowledge on the one hand and more general cognitive skills on the other (e.g. Cummins, in press). Also, like most other standardized measures of academic achievement it is clearly context-reduced. Thus, it fits the requirements of a context-reduced cognitively-demanding test. The grade 2 level was chosen to ensure that the test material would be conceptually appropriate for the youngest children in the sample.

The Antonyms, Sentence Repetition and Prepositional Usage items are presented in Appendix 2. Tha Antonyms test was chosen essentially as an oral vocabulary measure which conformed to the requirements of a context-reduced cognitively-demanding task. Some slight modifications were made to the LAU scoring procedures in that some responses were considered correct which were not listed as correct in the LAU. For example, "morning" was considered an acceptable antonym for "night", "salt" for "sweet" and "put" for "take". In other words, our criteria were somewhat more lenient than those in the test manual. Also, only the first 20 items

of the LAU test were administered as in pilot testing no Japanese child scored beyond that number.

The Sentence Repetition test was chosen on the basis of data showing that ability to correctly repeat increasingly long meaningful sentences is strongly related to verbal cognitive and academic skills (Das and Cummins, 1982). It is also context-reduced insofar as it involves manipulating language outside of the context of meaningful face-to-face communication. The sentences were each read in turn by the test administrator and were immediately repeated by the child. Following Das and Cummins (1982), the test was scored for number of stimulus words repeated (not necessarily in the correct order). On the basis of our pilot testing we administered only the first 18 items of the test.

The Prepositional Usage Test was included in order to allow our results to be compared directly to the reanalysis of the Wright and Ramsey data (Cummins, 1981b). All the 18 comparisons possible on this test between younger and older immigrant students in the reanalysis favored older students suggesting that the test measures L2 proficiencies which are similar to other cognitive/academic measures. In order to allow the possibility of direct comparison with the Cummins (1981b) data, no modifications were made to the test, although we had reservations about some of the items.

English and Japanese Interview Measures. The conditions under which the interviews were conducted have already been described and a detailed description of the phases of the interview is provided in Appendix 3. Here we will outline the rationale underlying the design of the interviews.

Recall that our primary goal in developing measures of Japanese and English proficiency was to examine the extent to which context-reduced language proficiency could be distinguished from context-embedded proficiency. Although there was considerable evidence for a global context-reduced language proficiency dimension (see Cummins, in press; Oller, 1981), it seemed likely that several different aspects of context-embedded proficiency might be distinguished. For example, Canale and Swain (1980) had suggested that "communicative competence" might be broken down into at least three components, namely, grammatical, sociolinguistic and strategic competencies. However, no research evidence was available at the time to support these hypotheses.

Given the fluid nature of the field it seemed appropriate to adopt an exploratory approach and not make a priori judgements about the constituents of communicative proficiency. We therefore developed an interview schedule which consisted of four phases (three in Japanese) each with somewhat different communicative demands. In developing the interview schedule, we were influenced by the Canale and Swain framework and tried to provide situations which would allow us to assess their dimensions of communicative competence.

As described in Appendix 3, the first phase was a "warm-up" informal conversation which lasted for up to ten minutes; this was followed by a role-playing situation involving a toy telephone. We included this situation in an attempt to assess children's use of sociolinguistically appropriate forms. The third phase was a task in which children were required to place a series of five pictures in logical sequence and describe the story. This was included principally to provide opportunities for observing children's use of cohesive devices, a major aspect of discourse competence (Canale, 1981). The final phase was a picture description task which was intended to provide opportunities to observe children's strategic competence.

The Japanese interview was similar except that the Picture Description phase was omitted because of time constraints. The informal conversation phase lasted 5-7 minutes on average, the telephone tasks about 4-5 minutes and the picture sequence 2-3 minutes. These latter tasks were different from the English interview in that only 4 pictures were involved in the picture sequence task and the telephone role-playing required children: 1. to call their Japanese teacher and ask him/her to send the child's homework for next week by mail because s/he will not be at school; 2. to call a friend and invite him/her to a birthday party, and to sleep over if possible. These situations were designed to elicit formal and informal registers which in Japanese are regarded as extremely important to observe.

Interview Scoring Procedures. The scoring procedures and rating scales for the English and Japanese interviews are described in detail in Appendix 4. Here we will discuss the rationale for adopting these scoring procedures.

In the absence of a detailed theory of the components of communicative proficiency in general and of the development of English proficiency among Japanese children in particular we decided to develop indices of communicative proficiency on the basis of the interview data themselves. Thus, we listened to approximately 25 per cent of the interviews, chosen at random, and developed and refined the scoring categories and scales based on aspects of the interviews in general and specific aspects which appeared to be particularly salient. Thus, ratings of inflectional use in English were included because problems in verbal inflections and plural markers characterized the speech of the Japanese children. The final scales in Japanese and English, therefore, represent a marriage between the

Canale/Swain categories which guided the design of the interview and indices of proficiency which were dictated by the data themselves, or at least by our interpretations of the data.

The refinement of the English rating scales and the actual rating itself was carried out by the English interviewer (Daina Green) whose recollection of the interviews themselves with accompanying contextual and paralinguistic cues, undoubtedly influenced the scoring of several variables (e.g. 2. Interviewer speech). Because of this intense involvement with the data which obviously could not be matched by other raters, only one rating was obtained for the English interviews in the Japanese study.

For the Japanese interviews, however, two graduate assistants were involved and each scored five interviews conducted by the other. From the ten interviews scored by both assistants a total of 110 ratings each was available (10 students x 11 variables). There was exact agreement on 78 per cent of these ratings and in no case did the discrepancy exceed one point.

The means and standard deviations of the English and Japanese proficiency variables for grades 2/3 and grades 5/6 students can be found in Table 7.

Background (Predictor) Variables. The variables derived from the parent interview/questionnaire are presented in Appendix 1 and will be briefly described here according to category.

The variables fall into two broad categories within which there are several subcategories. The first broad category consists of Child Attributes (A) and Parent Background (G) which, with the exception of I.OR (#4) can be thought of as the "baggage" children bring to the task of learning English. The second broad category consists of behavior directly related to the language learning situation itself. Under this heading are included the subcategories of School Experience on Arrival (B), Present School Experience and Attitude (C), Parent-Related Language Behavior (D), Child Language Use and Preference (E), Additional Exposure to Japanese and English (F).

A subset of the variables in Appendix 1 was included in the multiple regression analysis as predictors of English and Japanese proficiency. Inclusion of specific variables was based primarily on judgements regarding their potential explanatory relevance for different aspects of proficiency. The predictor variables used in the regression analyses are presented in Table 9 in the Results section.

(b) Vietnamese Study. (i) Academic Language Proficiency. The reading comprehension subtest of the grade 2 Gates McGinitie test and the Prepositional Usage Test, both used in the Japanese study, were also used in the Vietnamese study. In addition, 40-item oral English and Vietnamese Antonyms tests and two Vietnamese Cloze tests were developed. The procedures used in developing the Antonyms and Cloze tests are described below.

Antonyms. The following criteria were applied in the initial selection of stimulus words for the Vietnamese and English Antonyms Tests:

1. The starting point was the Vietnamese concept, not English.
2. The word selected is in common use.
3. The Vietnamese stimulus word has an equivalent in English.

Ninety-five words were thus selected and included in the original Vietnamese and English versions.

Each version was tried out with a small number of educated adult native speakers of each language. Stimulus words whose responses were not easily accessible to the native speakers were eliminated. The list of stimulus words and acceptable responses obtained through this screening process was then referred to consultants (3 language teachers and a professor of Linguistics) for acceptance or rejection.[3]

The revised versions in both languages were then pilot-tested with a small group of Vietnamese students having the characteristics of the sample of students to be used in the Vietnamese Study. The data obtained provided the basis for the selection of the forty items in the final versions and for ordering the items in terms of relative difficulty.

It should be noted that of the 40 entries only 30 denote concepts that are the same (or similar) in both languages. The other 10 were different. The items peculiar to the Vietnamese test are in general the most difficult items in that test whereas the items peculiar to the English test are in general the easiest. This design was necessary to ensure sufficient variation in test scores in each language. It also allowed the possibility of comparing students directly across languages. The test items are presented in Appendix 5.

Cloze. Because of the wide age range in our sample we decided to administer two written cloze passages which varied in relative difficulty. Cloze procedures were chosen both because of the considerable evidence that they assess context-reduced cognitively-demanding language proficiency (e.g. Cummins, 1979) and also because of the ease with which they can be constructed and administered.

Test 1 (the easier test) was clozed from a story puplished in Popular Stories from Vietnam, Vol II (The Institute for Cultural Pluralism, School of Education, San Diego State University, California, 1977). Test 2 (the more difficult test) was adapted from a short expository passage based on published English materials written by Mr. Huynh Huu Tho of the Ontario Ministry Refugee Settlement Unit.

Both tests were first tried out with approximately ten educated adult native speakers of Vietnamese, revised, and pilot-tested with students having the characteristics of the sample of students to be used in the Vietnamese study.

A seven-word deletion rate was used and students' answers were scored according to an acceptable-response criterion. The tests were untimed. Both passages are presented in Appendix 5.

(ii) Interview. The English interview with the Vietnamese students followed similar procedures to that of the Japanese study, although only the free conversation and picture sequence phases were used. Consequently, the scoring scales (Appendix 4) are somewhat different from those in the Japanese study. These scales were worked out by two raters (the interviewer and another native English-speaking researcher) using basically similar exploratory procedures as those used in the Japanese study. The raters listened to 25 per cent of the interviews and together developed the categories and scales which could be most reliably scored.

A detailed background interview was not carried out in the Vietnamese study although information was obtained from the children about last grade completed in Vietnam, whether they had studied English in camp, age and length of residence.

Data Analysis

(a) Japanese Study. Analyses which were employed to test the interdependence hypothesis were partial correlational analysis, t-tests of the performance of older and younger students, and multiple regression involving both the full Japanese sample of 91 students and the subsample of 59 students for whom more complete data were available.

Within the subsample, exploratory factor analyses and multiple regression analyses were carried out to examine the relationships between context-embedded (interview) and context-reduced (academic) aspects of proficiency and also the relative influence on different aspects of proficiency of the Background and Attributes which children bring to the language learning situation on the one hand and their Behavior and Exposure to the language in that situation on the other.

In order to reduce the dependent variables to more manageable proportions for purposes of the regression analyses, Pearson product-moment correlations were computed and then factor analyses were carried out using the SPSS factor analyses program (Nie et al, 1976). For both English and Japanese analyses three factors with eigenvalues greater than one were obtained and were rotated to a varimax criterion. Factor scores (mean of zero and SD of 1) were then derived for each factor and were used as dependent variables in subsequent multiple regression analyses. Japanese academic proficiency was also included as a dependent variable in these regression analyses.

(b) Vietnamese Study. The interdependence hypothesis was tested in the Vietnamese study by computing Pearson and partial (controlling for length of residence) correlation coefficients between Vietnamese and English academic measures. Hierarchical multiple regression analyses were also carried out.

III. RESULTS

The results will be described for Japanese and Vietnamese studies separately in relation to each of the major research questions. First, the results of the exploratory factor analyses of English and Japanese proficiency measures will be described followed by the relationships of the proficiency dimensions across languages. We will then outline the various analyses designed to test the interdependence hypothesis in the Japanese study and then examine the determinants of English and Japanese proficiency. Finally, analyses designed to test the interdependence hypothesis in the Vietnamese study will be presented.

The Structure of English Proficiency among Japanese Students

The results of the Varimax rotation are presented in Table 1. The first factor is defined by the three Syntax measures, the second by the three Richness measures and by Ease while the third factor is defined by the English Academic Proficiency measures. However, it can be seen that most of the academic proficiency measures show moderate loadings on Factors 1 and 2 in addition to Factor 3. The first two factors appear to correspond in a general way to the syntactic/morphological and pragmatic dimensions which Damico and Oller (1980) have distinguished in their research on children's language disorders. The fact that Picture Sequence Cohesion loads on Factor 2 rather than Factor 1 supports the distinction between grammatical and discourse or pragmatic competence (Bachman & Palmer, 1981; Canale, 1981). The pattern of loadings on these two factors suggest the labels Syntax (Factor 1) and Interactional Style (Factor 2). The third factor is labelled English Academic Proficiency.

TABLE 1

Factor Analysis of English Academic Language Proficiency (17-21) and Interview Measures (1-16)

Variable	Varimax Rotation 1	2	3
1. Pronunciation	.69	.26	.22
2. Interviewer Speech	.48	.41	.32
3. Semantically Appropriate Responses	.17	.58	.22
4. Conversational Richness	.16	.77	.08
5. Inflections of Verbs and Nouns	.67	.14	.35
6. Article Use	.73	.24	.20
7. Conversational Syntax	.80	.23	.44
8. Ease	.23	.73	.16
9. Tel. Question Formation	.57	.31	.26
10. Tel. Appropriateness	.39	.20	.48
11. Picture Sequence Syntax	.73	.22	.44
12. Picture Sequence Cohesion	.14	.62	.52
13. Picture Sequence Richness	.32	.66	.31
14. Picture Description Syntax	.81	.36	.33
15. Picture Description Strategies	.56	.49	.25
16. Picture Description Richness	.40	.64	.24
17. English Vocabulary	.46	.33	.72
18. English Reading	.39	.29	.84
19. English Prepositions	.34	.17	.50
20. English Antonyms	.52	.41	.60
21. Sentence Repetition	.49	.50	.56

Thus, the factor analysis provides evidence for a distinction between context-reduced and context-embedded aspects of L2 proficiency among immigrant students. Within context-embedded proficiency we can distinguish between syntax and interactional style dimensions. We would emphasize, however, the exploratory nature of this aspect of the study. The specific proficiency indices were derived largely on an intuitive basis rather than from an explicit theory of the nature of communicative proficiency and accordingly the factor analysis is exploratory rather than confirmatory.[4]

The Structure of Japanese Proficiency

At first sight the three Japanese factors (Table 2) are not consistent with the hypothesized distinction between context-embedded and context-reduced language proficiency. Eight of the 12 variables have loadings of .50 or greater on Factor 1 and this factor appears to represent a general Japanese proficiency dimension. Factor 2 has high loadings from Japanese Academic Language Proficiency, Pronunciation and Fluency while the third factor is defined only by Use of English. The factor loadings become more intelligible when we realize that Age is highly correlated with Factor 1 and LOR has a high negative correlation with Factor 2. This suggests that the variables loading on Factor 2 are those that are negatively affected by students' length of residence outside Japan, and this, rather than any intrinsic relationships, is what accounts for their presence on Factor 2. Recall that Japanese Academic Language Proficiency is computed in relation to grade norms and this removal of age-related variance probably explains its low loading on the general Japanese factor.

In conclusion, the factor analysis clearly suggests that communicative proficiency does not exist in a vacuum but rather its structure is sensitive to external influences. An implication is that attempts to empirically confirm models

TABLE 2

Factor Analysis of Japanese Academic Language Proficiency (1) and Interview (2-12) Measures

Variable	Varimax Rotation 1	2	3
1. Japanese Academic Language Proficiency	.23	.56	.01
2. Pronunciation	-.09	.71	.23
3. Interviewer Speech	.83	.10	.04
4. Conversational Richness	.78	.27	-.29
5. Use of English	.07	.15	.68
6. Fluency	.38	.75	.02
7. No Response	.75	.19	.14
8. Conversational Syntax	.71	.42	-.10
9. Ease	.86	.12	-.36
10. Tel. Directions	.63	.06	.08
11. Tel. Appropriateness	.51	.25	.13
12. Picture Sequence Richness	.67	.08	.22

of communicative proficiency (e.g. Bachman & Palmer, 1981) cannot necessarily be generalized beyond the specific language learning context in which the data were gathered.

How Is Communicative Proficiency Related across Languages?

Pearson and partial correlations between English and Japanese factor scores are presented in Table 3. Age and LOR were controlled in the partial correlations because of the influence of these variables on the Japanese (and English) factors. It can be seen that EFAC 2 (English Factor 2) is correlated highly with JFAC 1 (Japanese Factor 1) and that this correlation is quite robust, being uninfluenced by the partialling out of Age and LOR. EFAC 1 and JFAC 2 also show a significant Pearson correlation but this disappears when Age and LOR are controlled. A marginally significant negative correlation appears between EFAC 1 and JFAC 1 when Age and LOR are controlled, suggesting a slight tendency for children who devote time to maintaining Japanese to have less well-developed English conversational syntax.

The strong correlation between EFAC 2 and JFAC 1 can be understood in terms of the indices of proficiency which are common to both factors. Conversational Richness, Picture Sequence Richness and Ease load on both. Interviewer speech also has a high loading on JFAC 1 and a moderate (.41) loading on EFAC 2.

Thus, the correlations seem to indicate that interactional style is interdependent across languages. In other words, a child who tends to volunteer information and provide detailed elaborate responses to questions in Japanese will tend to manifest the same types of linguistic behavior in English. One might expect this trait to be related to personality variables and the extent to which this is the case will be examined in a later section.

The lack of significant correlations between EFAC 3 and JFAC 2, both of which incorporate the academic language proficiency variables, is not surprising in view

TABLE 3

Pearson and Partial Correlations between
English and Japanese Factor Scores

	PEARSON			PARTIAL Controlling for: AGE LOR		
	EFAC1	EFAC2	EFAC3	EFAC1	EFAC2	EFAC3
JFAC1	-0.18 (59) P=.09	0.51 (59) P=.00	0.16 (59) P=.12	-0.24 (56) P=.04	0.50 (56) P=.00	-0.06 (56) P=.32
JFAC2	-0.31 (59) P=.01	-0.16 (59) P=.11	-0.18 (59) P=.09	0.04 (56) P=.38	0.06 (56) P=.33	-0.10 (56) P=.22
JFAC3	-0.04 (59) P=.37	-0.07 (59) P=.30	0.11 (59) P=.19	0.04 (56) P=.40	-0.05 (56) P=.37	0.14 (56) P=.16

of the hybrid nature of JFAC 2, which has considerably higher loadings from Pronunciation and Fluency than from Japanese Academic Proficiency. In order to examine the interdependence hypothesis proposed in question #1, it is necessary to examine the relationships between Japanese Academic Proficiency and the English Academic Proficiency variables.

Is Academic Language Proficiency Interdependent across Languages?

Three analytic procedures were used to test the interdependence hypothesis: first partial correlations, controlling for LOR, were computed between Japanese Academic Proficiency and Age on Arrival (AOA), on the one hand, and the English Academic Proficiency variables, both individually and as represented by EFAC 3, on the other. It is necessary to partial out LOR because it is positively related to the development of English Academic Proficiency, but negatively related to Japanese Academic Proficiency, thereby masking the relationships between Japanese and English Academic Proficiency.

The second procedure used to test the interdependence hypothesis was multiple regression analysis. We examined the increment to explained variance in English Academic Proficiency attributable to entering variables indicative of Japanese Academic Proficiency in the regression equation after LOR. These analyses were carried out on the complete original sample (N=91) with English Reading as the dependent variable and on the subsample (N=59) with EFAC 3 as the dependent variable.

The third type of analysis involved examining the effects of group differences in age on arrival (AOA) on performance in English. These comparisons were carried out both between older and younger siblings and between grades 5/6 and 2/3 children. Our hypothesis was that, with LOR controlled, older children would perform better on the cognitive/academic measures.

Partial Correlations. It can be seen in Table 4 that, with one exception, all the correlations between English cognitive/academic measures and both Japanese Academic Language Proficiency and Age on Arrival are significant (using one-tailed tests) in the predicted direction. These correlations are clearly consistent with the interdependence hypothesis, especially since variance due to age has been removed from Japanese Academic Language Proficiency as a result of the necessity to express scores in relation to grade norms.

Regression Analyses. In the regression analyses Age on Arrival (AOA) was dichotomized based on a median split and a dummy variable (AOA:older group) created to represent membership in the group of children who arrived at older ages. An advantage of this is that it potentially permits us to examine how much difference arriving at an older age makes in raw scores on the English Academic Proficiency variables. Children who arrived in an English-speaking country at ages between 81 and 128 months were given a code of 1 while those who arrived between 12 and 80 months were given a code of zero.

It can be seen in Table 5 that in the larger sample LOR accounted for 30 per cent of the variance in English Reading. Japanese Academic Proficiency accounted for an additional 19 per cent while AOA:Older Group and Age brought the total explained variable to 53 per cent. In all, the cognitive/academic block accounted for an increment in explained variance of 23.85 per cent after the effect of LOR was removed.

Less incremental variance is explained by the cognitive/academic predictors when this regression is carried out in the subsample (N=59). LOR explains 39.4 per cent of the variance in English Reading while the cognitive/academic block adds 14.9 per cent to a total explained variance of 54.3 per cent. It should be noted that when LOR is entered first all variance shared between LOR and the cognitive/academic block is attributed to LOR and thus the figure of 14.9 per cent represents a conservative estimate of the effect of the cognitive/academic variables.

TABLE 4

Partial Correlations between English Academic Language Proficiency Measures and Both Japanese Academic Language Proficiency and Age on Arrival Controlling for Length of Residence

Variable	Japanese Academic Language Proficiency		Age on Arrival	
	N = 57	N = 88	N = 57	N = 88
1. Vocabulary	.42 **	.44 **	.22 *[1]	.30 **
2. Reading	.46 **	.52 **	.29 *	.38 **
3. Prepositions	.22*[1]	.23 *	.25 *[1]	.30 **
4. Antonyms	.30 **		.37 **	
5. Sentence Repetition	.31 **		.11	
6. EFAC3	.33**		.33**	

** $p < .01$ (one-tailed)

* $p < .05$ (one-tailed)

1 $p > .05$ two-tailed

TABLE 5

Regression of English Reading on LOR and Cognitive/Academic Predictor Variables (N=91)

	Multiple R	R square	Rsq change	Simple R
LOR	.55	.30	.30	.55
Japanese Academic Proficiency	.70	.49	.19	.23
AOA:Older Group	.73	.53	.04	-.03
Age	.73	.53	.01	.40

TABLE 6

Regression of EFAC3 on LOR and Cognitive/ Academic Predictor Variables (N=59)

	Multiple R	R square	Rsq change	Simple R
LOR	.41	.17	.17	.41
Japanese Academic Proficiency	.51	.26	.09	.18
AOA:Older Group	.59	.35	.09	.08
Age	.59	.35	.00	.41

When EFAC3 is used as the dependent variable for English Academic Proficiency (Table 6) the total explained variance drops to 35 per cent with the cognitive/academic block explaining slightly more incremental variance (18 per cent) than LOR (17 per cent).

In summary, it is clear from these regressions that students' level of L1 cognitive/academic development makes a considerable difference in the rapidity with which L2 cognitive/academic proficiency is developed. Despite the fact that the languages are so different, Japanese Academic Proficiency by itself adds 19 per cent to the explanation of variance in English Reading (Table 5). We regard these results as rather strong evidence for the interdependence hypothesis and the existence of a common underlying proficiency. Clearly, however, there is considerable variance left unexplained and the extent to which this variance can be accounted for by other variables will be examined in a later section.

Comparison of Different Age Groups

(a) Grade Level Differences in English and Japanese Proficiency. Differences between grades 5/6 and grades 2/3 students were examined by means of t tests for independent samples since group differences in LOR were not significant. There were significant differences in favor of older students on four of the five (80%) English context-reduced measures but on the context-embedded (interview) measures differences reached significance in only four out of 16 (25%) cases (Table 7). This pattern of differences supports the interdependence hypothesis but is inconsistent with suggestions that older children make more rapid progress in all aspects of L2 acquisition (e.g. Krashen et al, 1979).

TABLE 7

Comparison of Older (Grades 5 and 6)
and Younger (Grades 2 and 3)
Students' Performance on
English and Japanese Measures

Variable		Mean	Standard Deviation	t	Probability (two-tailed)
1. Age in Months	Gr. 2/3 (N=29)	98.3	7.6		
	Gr. 5/6 (N=30)	133.8	5.6	-20.5	.00
2. Length of Residence	Gr. 2/3	33.2	18.3		
	Gr. 5/6	38.1	25.2	-0.9	.39
3. Age of Arrival in Canada	Gr. 2/3	65.1	19.5		
	Gr. 5/6	94.0	28.2	-4.6	.00
ENGLISH ACADEMIC LANGUAGE PROFICIENCY					
4. English Vocabulary	Gr. 2/3	29.8	9.3		
	Gr. 5/6	35.1	10.3	-2.1	.04
5. English Reading	Gr. 2/3	25.4	9.6		
	Gr. 5/6	32.0	9.0	-2.7	.01
6. English Prepositions	Gr. 2/3	6.4	2.4		
	Gr. 5/6	8.2	2.7	-2.6	.01
7. English Antonyms	Gr. 2/3	10.6	5.0		
	Gr. 5/6	14.2	4.8	-2.8	.01
8. Sentence Repetition	Gr. 2/3	95.4	27.6		
	Gr. 5/6	104.7	31.7	-1.2	.23
ENGLISH INTERVIEW					
9. Pronunciation	Gr. 2/3	3.0	1.1		
	Gr. 5/6	2.8	1.2	0.5	.60

TABLE 7 (con't...2)

Variable		Mean	Standard Deviation	t	Probability (two-tailed)
ENGLISH INTERVIEW (Con't)					
10. Interviewer Speech	Gr. 2/3	1.5	0.6		
	Gr. 5/6	1.7	0.5	-1.2	.24
11. Semantically Appropriate Responses	Gr. 2/3	1.7	0.6		
	Gr. 5/6	1.9	0.3	-2.1	.04
12. Conversational Richness	Gr. 2/3	0.9	0.8		
	Gr. 5/6	1.1	0.8	-1.0	.33
13. Inflections of Verbs and Nouns	Gr. 2/3	1.0	0.8		
	Gr. 5/6	1.3	0.8	-1.3	.19
14. Article Use	Gr. 2/3	1.1	0.8		
	Gr. 5/6	1.2	0.9	-0.4	.68
15. Conversational Syntax	Gr. 2/3	2.1	1.4		
	Gr. 5/6	2.5	1.6	-1.2	.24
16. Ease	Gr. 2/3	1.0	0.7		
	Gr. 5/6	1.3	0.8	-1.2	.23
17. Tel. Question Formation	Gr. 2/3	1.1	0.8		
	Gr. 5/6	1.3	0.7	-0.8	.45
18. Tel. Appropriateness	Gr. 2/3	1.3	0.7		
	Gr. 5/6	1.6	0.5	-2.4	.02
19. Picture Sequence Syntax	Gr. 2/3	1.1	1.1		
	Gr. 5/6	1.6	1.4	-1.3	.19
20. Picture Sequence Cohesion	Gr. 2/3	1.1	0.7		
	Gr. 5/6	1.6	0.7	-2.3	.03
21. Picture Sequence Richness	Gr. 2/3	1.1	0.7		
	Gr. 5/6	1.5	0.7	-2.1	.05
22. Picture Description Syntax	Gr. 2/3	1.2	1.3		
	Gr. 5/6	1.7	1.4	-1.5	.14

TABLE 7 (con't...3)

Variable		Mean	Standard Deviation	t	Probability (two-tailed)
ENGLISH INTERVIEW(Cont.)					
23. Picture Description Strategies	Gr. 2/3	1.4	0.9		
	Gr. 5/6	1.9	1.0	-1.8	.08
24. Picture Description Richness	Gr. 2/3	0.9	0.8		
	Gr. 5/6	1.3	0.8	-1.9	.07
JAPANESE MEASURES					
25. Japanese Academic Language Proficiency	Gr. 2/3	48.2	10.4		
	Gr. 5/6	55.3	13.2	-2.3	.03
26. Pronunciation	Gr. 2/3	2.5	0.9		
	Gr. 5/6	2.7	0.5	-0.9	.40
27. Interviewer Speech	Gr. 2/3	1.3	0.8		
	Gr. 5/6	1.9	0.3	-4.1	.00
28. Conversational Richness	Gr. 2/3	0.7	0.6		
	Gr. 5/6	1.4	0.5	-4.6	.00
29. Use of English	Gr. 2/3	1.3	0.5		
	Gr. 5/6	1.5	0.5	-1.1	.26
30. Fluency	Gr. 2/3	1.5	0.6		
	Gr. 5/6	1.8	0.4	-2.3	.03
31. No Response	Gr. 2/3	1.3	0.8		
	Gr. 5/6	1.8	0.4	-3.0	.01
32. Conversational Syntax	Gr. 2/3	0.8	0.7		
	Gr. 5/6	1.4	0.5	-3.8	.00
33. Ease	Gr. 2/3	0.8	0.7		
	Gr. 5/6	1.3	0.6	-2.7	.01
34. Tel. Directions	Gr. 2/3	2.4	0.9		
	Gr. 5/6	2.8	0.5	-2.2	.03
35. Tel. Appropriateness	Gr. 2/3	0.8	0.5		
	Gr. 5/6	1.2	0.5	-2.8	.01
36. Picture Sequence Richness	Gr. 2/3	0.7	0.5		
	Gr. 5/6	1.1	0.5	-2.9	.01

On the Japanese variables older students performed better on all but Pronunciation and Use of English. These findings are corroborated by the results of the parent interviews where 68 per cent of the grades 2 and 3 children's parents reported errors in their children's present Japanese speech, whereas only 43 per cent of the grades 5 and 7 children's parents reported similar errors, despite the fact that mean LOR was somewhat longer for the older students. These findings suggest that level of Japanese proficiency on arrival in Canada may be an important factor in maintaining the language.

(b) Siblings. There were 14 sets of siblings in the subsample (N=59). In 13 cases one sibling was in grades 5 or 6 and the other in grade 2 or 3. In the remaining case the siblings were in grades 2 and 3. In this latter case the grade 3 child was included in the older group and the grade 2 child in the younger group despite the fact that the age difference was less than among the other 13 siblings. Sibling data provide a good opportunity to further test the interdependence hypothesis since family background and experiences are largely controlled between younger and older siblings. The interdependence hypothesis predicts that older siblings whose L1 cognitive/academic proficiency is better developed (in absolute terms) than that of their younger siblings, would perform better on measures of English Academic Proficiency. The sibling comparisons are presented in Table 8.

TABLE 8

Correlated t Tests for Sibling Differences on Japanese and English Cognitive/Academic Measures

Variable		Mean	SD	t	Probability (two-tailed)
1. Japanese Academic Language Proficiency	younger	50.6	12.6	-1.33	.21
	older	54.4	13.2		
2. English Vocabulary	younger	33.1	9.7	-3.4	.004
	older	37.2	9.9		
3. English Reading	younger	29.4	8.8	-2.9	.01
	older	33.3	8.9		
4. English Prepositions	younger	6.8	2.4	-1.8	.09
	older	8.2	3.2		
5. English Antonyms	younger	12.3	5.5	-3.2	.007
	older	14.8	4.2		
6. Sentence Repetition	younger	105.6	27.1	-1.95	.07
	older	115.1	22.9		

Although differences were not significant in the extent to which older and younger siblings were performing at grade level in Japanese academic proficiency, significant differences were observed in favor of older siblings on three out of five of the English academic measures. On Prepositions and Sentence Repetition the differences approached significance ($p < .10$). As in the case of the grades 5/6 v. 2/3 analyses no differences were found between older and younger siblings on a large majority of English context-embedded variables but differences were apparent on most of the variables that loaded on JFAC1.

In summary, the results of all the analyses carried out are consistent with the interdependence hypothesis, namely, that development of L2 cognitive/academic (context-reduced) proficiency is partially a function of level of L1 cognitive/academic proficiency at the time when intensive exposure to L2 begins. The findings also suggest that older immigrant students maintain and develop their L1 skills better than students who immigrate at a younger age. It is significant that despite the vast difference in subjects (Japanese upper-class versus Finnish working-class) and contexts, this pattern of results is precisely the same as that reported by Skutnabb-Kangas and Toukomaa (1976), namely level of L1 proficiency on arrival is important both for acquisition of L2 academic proficiency and for continued development of L1 academic proficiency.

However, L1 cognitive/academic proficiency is only one factor influencing the acquisition of L2 proficiency. It remains to be seen what other factors are important and to what extent distinct sets of predictor variables <u>differentially</u>

affect the acquisition of different aspects of L2 proficiency. Also, we are interested in the determinants of the continued development of Japanese proficiency.

Prediction of English and Japanese Proficiency

A set of 28 predictor variables derived largely from the parent interviews was used to predict both English and Japanese proficiency. Two additional variables, JFAC1 and Japanese Academic Proficiency were included in the English regression analyses. The predictor variables were grouped into two major blocks, the first related to the Background (e.g. Mother's Education) and Attributes (e.g. Personality, AOA etc.) of the children and the second related to Exposure to and Behavior relevant to the acquisition of English and Japanese (e.g. LOR, Child Language to Siblings). Within each of these major blocks sub-categories of variables were distinguished. The specific variables according to blocks, coding details and cross-references to Parent Questionnaire data listed in Appendix 1 are presented in Table 9.

The variables were entered into the regression equations in two basic orders, namely, Background/Attributes followed by Exposure/Behavior and Exposure/Behavior followed by Background Attributes. The purpose of this procedure was to estimate how much variance could be accounted for uniquely by each major block. Within each major block the order of entry of individual variables was the same as in Table 9. These analyses are presented in summary form in Table 10. What is of primary interest here is not the total amount of variance explained, which may not be stable due to the relatively small number of subjects, but the relative importance of what children bring to the language learning situation as compared to their actual experiences in that situation.

In order to examine this issue the percentages of total explained variance which each block accounts for uniquely were compared for the seven variables. Thus, when the Exposure/Behavior block is entered after the Background/Activities block in the EFAC1 regression, its increment to explained variance is 62 per cent

TABLE 9

Predictor Variables Used in Regression Analyses

BLOCK	Appendix 1 Cross-Reference*
I. BACKGROUND/ATTRIBUTES	
A. COGNITIVE/ACADEMIC ATTRIBUTES	
1. Japanese Academic Proficiency **	
2. AOA: Older Group	(A5)
3. Age in Months	A2
B. OTHER PERSONAL ATTRIBUTES	
4. Personality	A6
5. JFACI **	
6. Sex	A1
C. BACKGROUND ATTRIBUTES	
7. Mother's English Difficulty	G40
8. Father's English Difficulty	G39
9. Mother's Education	G38
10. Father's Education	G37
11. Desired Location: University Education	G44
II. EXPOSURE/BEHAVIOR	
D. EXPOSURE	
12. LOR	A4
E. SCHOOL EXPERIENCE ON ARRIVAL	
13. ESL Assistance	B10
14. How Long to Make Canadian Friends	B8
15. Problems in Adjusting	B7
F. PARENT-RELATED LANGUAGE BEHAVIOR	
16. Language Spoken Parents to Child	D14
17. Reaction to Child's English	D16
18. Language Spoken to Parents	D15

E. CHILD LANGUAGE USE AND PREFERENCE	
19. Child Language to Siblings	E19
20. Child Language to Japanese Friends	E21
21. How Often Play with Caandian Friends	E22
22. Errors in Spoken Japanese	E18
23. Language Child Prefers	E17
H. ADDITIONAL EXPOSURE TO JAPANESE AND ENGLISH	
24. Visits to Japan	F23
25. Japanese Study Hours Per Week	F27
26. English Study	F28
27. TV	F29
28. Japanese Books Read	F30
29. English Books Read	F31
30. Book Preference	F32

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* The codes used in the regression analyses do not always correspond to the categories in Appendix 1 since categories with very low numbers were usually combined with adjoining categories for purposes of the regressions.

** These variables were not included as predictor variables in the Japanese analyses

which represents 65 per cent of the total explained variance (95%) on that variable (see Table 10).

It is clear from Table 10 that the Exposure/Behavior block exerts a greater impact on EFAC1 than on either EFAC2 or EFAC3 (65% of explained variance accounted for uniquely versus 40% and 49%), whereas the Background/Attributes block accounts for more of the explained variance in EFAC2 and EFAC3 than on EFAC1 (36% and 38% of explained variance accounted for uniquely respectively versus 20%).

For the Japanese measures the greater proportions of variance accounted for by the Background/Attributes block in JFAC1 and by the Exposure/Behavior block in JFAC2 can be attributed largely to the effects of Personality, Age and Age on Arrival on JFAC1 and LOR on JFAC2.

The relative influence of Exposure and Attributes on the acquisition of English was examined in a reduced model involving only seven variables (Table 11). Exposure is represented by LOR, Cognitive/Academic Attributes by variables 2-4 and Other Personal Attributes by variables 5 - 7. After LOR is entered into the equation, Attributes account for an increment in explained variance of 10%, 27% and 21% in EFAC1, EFAC2 and EFAC3 respectively. However, for EFAC2, Cognitive/Academic variables account for only 5% increment while Other Personal Attributes account for 21%. For EFAC3 the pattern is reversed, with 18% and 3% incremental variance accounted for by these two blocks respectively.

In summary, the results of the regression analyses show that the attributes which children bring to the task of acquiring L2 are differentially related to the acquisition of different aspects of L2. Acquisition of conversational syntax is much more affected by exposure to L2 and behavior in relation to the language than by children's personal attributes or background characteristics. The opposite

TABLE 10

Cumulative Amount of Variance (R^2) in English and Japanese Proficiency Explained by Background/Attributes and Exposure/Behavior Blocks

	EFAC 1	EFAC 2	EFAC 3	JFAC 1	JFAC 2	JFAC 3	Japanese Academic Proficiency
Background/Attributes	33	45	39	46	35	29	30
Exposure/Behavior (E/B)	95	75	77	65	84	57	73
E/B unique: (a) Increment	62	30	38	19	49	28	43
(b) % of total	65	40	49	29	58	49	59
Exposure/Behavior	76	48	48	32	71	39	52
Background/Attributes (B/A)	95	75	77	65	84	57	73
B/A unique: (a) Increment	19	27	29	33	13	18	21
(b) % of total	20	36	38	51	15	32	29

TABLE 11

Exposure and Attribute Predictors of English Proficiency

	EFAC 1			EFAC 2			EFAC3		
	R square	Rsq change	Beta	R square	Rsq change	Beta	R square	Rsq change	Beta
1. LOR	.26	.26	.54	.21	.21	.49	.17	.17	.73
2. Japanese Academic Proficiency	.26	.00	.13	.25	.04	.11	.26	.09	.25
3. AOA: Older Group	.28	.02	-.06	.27	.01	.06	.35	.09	.40
4. Age in Months	.29	.01	-.05	.27	.00	-.14	.35	.00	.08
5. Personality*	.30	.01	-.03	.32	.05	.09	.37	.01	-.09
6. JFAC 1	.33	.03	-.21	.44	.12	.42	.37	.01	-.11
7. Sex**	.36	.02	-.16	.48	.04	.21	.38	.01	.07

*5 point scale, 1 = very shy, 5 = very outgoing

**2 = Female, 1 = Male

is true for L2 interactional style and L2 cognitive/academic proficiency which are considerably influenced by children's personality characteristics and by L1 cognitive/academic proficiency respectively. The influence of L1 cognitive/academic proficiency on acquisition of L2 cognitive/academic proficiency was further investigated in the Vietnamese study.

Vietnamese Study

Pearson correlations among English and Vietnamese cognitive/academic proficienty variables are presented in Table 12. With the exception of some correlations involving the Prepositions task the intra-and inter-language correlations are all significant at less than the .01 level. Partialling out LOR increased the English-Vietnamese correlations somewhat. The strong positive correlations between Age and Last Grade in Vietnam on the one hand and English and Vietnamese proficiency variables on the other, provides further support for the interdependence hypothesis.

Because of the strong correlations between the English and Vietnamese Antonyms tasks and the other cognitive/academic tasks, only these two variables were used in the hierarchical regression analyses presented in Table 13. The small number of students in the sample did not permit the English proficiency variables to be meaningfully reduced through factor analytic techniques. The major focus here will be on the cognitive/academic measures and only general trends will be reported for the interview measures.

It can be seen in Table 13 that L1 cognitive/academic proficiency strongly predicts L2 cognitive/academic proficiency and that Age is strongly related to L1 cognitive/academic proficiency. The fact that LOR accounts for considerably less variance than in the Japanese study is probably due to its smaller range in the Vietnamese sample. However, it is worth noting that in the Vietnamese study LOR generally accounted for more variance on the English interview dependent variables than on the academic dependent variables, whereas the L1 cognitive/academic block showed the opposite pattern. This trend was also evident in the Japanese study.

TABLE 12

Correlation Matrix for English and Vietnamese Academic Proficiency Measures

	1	2	3	4	5	6	7	8	9	10
1. Age	1.00									
2. LOR	-.11	1.00								
3. V Antonyms	.64	-.17	1.00							
4. V Cloze 1	.39	-.18	.60	1.00						
5. V Cloze 2	.64	-.30	.90	.68	1.00					
6. E Reading	.66	.11	.68	.41	.51	1.00				
7. E Prepositions	.39	.24	.45	-.06	.23	.54	1.00			
8. E Antonyms	.61	.25	.69	.43	.52	.83	.51	1.00		
9. Last Grade in Vietnam	.88	-.35	.84	.65	.78	.63	.23	.60	1.00	
10. Sex	-.23	-.27	-.52	-.39	-.45	-.22	.02	-.16	-.50	1.00

TABLE 13

Predictors of English and Vietnamese Academic Proficiency

Variables	E Antonyms			V Antonyms		
	R square	Rsq change	Beta	R square	Rsq change	Beta
1. LOR	.06	.06	.35	.03	.03	-.03
2. V Antonyms	.61	.56	.67			
3. Age	.66	.05	.26	.42	.39	.55
4. Sex	.68	.02	.17	.55	.13	-.38

Less than 30 per cent of the variance was accounted for on a large majority of the interview measures.

In summary, the findings of the Vietnamese study provide further strong evidence for the interdependence hypothesis.

IV. DISCUSSION AND CONCLUSIONS

The findings of the two studies will be discussed in relation to the specific research issues outlined in the first section and then the relevance of the findings for the relationships between language proficiency and achievement of language minority students in general will be considered.

The Interdependence Hypothesis

In both studies we found that L1 cognitive/academic proficiency accounted for a highly significant proportion of variance in L2 cognitive/academic proficiency, as predicted by the interdependence hypothesis. Several other analyses in the Japanese study (e.g. sibling differences) also supported the interdependence hypotheses. The fact that the same pattern of findings emerged among two such dissimilar samples suggests the robustness of the hypothesis. However, the fact that older immigrant students make more rapid progress in acquiring academic aspects of L2 does not necessarily mean that they will attain higher ultimate levels of L2 than younger students, since LOR is also an extremely important factor. In some situations where younger immigrant or language minority students reach only a low-level plateau in development of L2 cognitive/academic skills (e.g. Skutnabb-Kangas and Toukomaa, 1976), older immigrant students may have better long-term prospects. However, under different sociocultural learning conditions (e.g. Cummins, 1981b) younger immigrant students appear more likely to attain grade norms because of their longer LOR. The findings of Cummins (1981b) suggest that the effects of LOR tend to diminish

after 5 years, and thus there may be a critical age on arrival at about age 12, after which it will become increasingly difficult for students to reach grade-appropriat levels of L2 cognitive/academic proficiency.

The present findings also suggest that the advantage of older learners applies mainly to cognitive/academic aspects of L2 acquisition. The sibling and grade level analyses found few differences in favor of older students on context-embedded aspects of L2. Also, in the regression analyses age on arrival and age accounted for substantial variance only on cognitive/academic aspects of English proficiency. This pattern of findings is not consistent with the conclusions of Krashen et al, (1979), but agrees with Ekstrand's (1978) finding of no age differences in L2 free oral production.

Maintenance of L1

Our findings are consistent with those of Skutnabb-Kangas and Toukounaa (1976) and of Snow and Hoefnagel-Höhle in suggesting that age of immigration is important for the continued development of L1 proficiency. For example, Snow and Hoefnagel-Höhle (1978) reported a significant advantage for older English L1 immigrant children (and adults) acquiring Dutch as a second language and noted a tendency for younger children to replace English with Dutch:

> "With one exception (a 7 year-old girl), it was only among the 3-5 year old Beginners (and among the 6-7 year-old Advanced subjects, who had learned Dutch while 3-5 years old) that growing control of Dutch was associated with breakdown of control of English. Although a few subjects in all age groups showed some degree of negative interference, mostly at the lexical level, from Dutch into English, large decreases in English fluency and a preference for speaking Dutch were observed only among the youngest subjects". (1978, p. 1126)

Similarly, among the present Japanese sample, both the psychometric analyses and parents' observations suggested that students who immigrated at younger ages developed less adequate L1 skills than students who immigrated at older ages.

In short, the data suggest that younger immigrant children tend to replace L1 in the process of acquiring L2 whereas older children tend to add L2 to their L1.

In other words, older immigrant children are more likely to develop an additive form of bilingualism in contrast to the subtractive form developed by many younger immigrant students (Lambert, 1975). This subtractive tendency was observed in the present study despite the strong L1 support children received both at home and at the Japanese school.

The Nature of L2 Proficiency

Although this aspect of our study is essentially exploratory, the pattern of findings from the factor analysis and regression equations suggest a distinction between Attribute-based and Input-based aspects of L2 proficiency. Attribute-based proficiency refers to those aspects of L2 proficiency which are strongly related to personal characteristics of the individual (e.g. personality or cognitive traits). Input-based proficiency, on the other hand, refers to those aspects of proficiency in which individual differences are determined primarily by differential exposure to "comprehensible input" (Krashen, 1981) with stable attributes of the individual accounting for relatively little variance.

This conceptualization allows us to place the interdependence hypothesis into a broader framework insofar as all attribute-based aspects of proficiency will be interdependent across languages. This would not be the case for input-based aspects of proficiency. The model of attribute-based proficiency suggested by the present findings is shown in Figure 2.

Essentially the model proposes that L1 and L2 interactional style are interdependent as a result of the fact that both are, to a significant extent, manifestations of personality attributes of the individual. Similarly, L1 and L2 cognitive/academic proficiency are interdependent as a result of the fact that both are manifestations of the same underlying cognitive proficiency.

The major evidence for this conceptualization of L2 proficiency in the present study comes from the differential patterns of prediction for the three English dependent variables. Attributes of the learner accounted for considerably

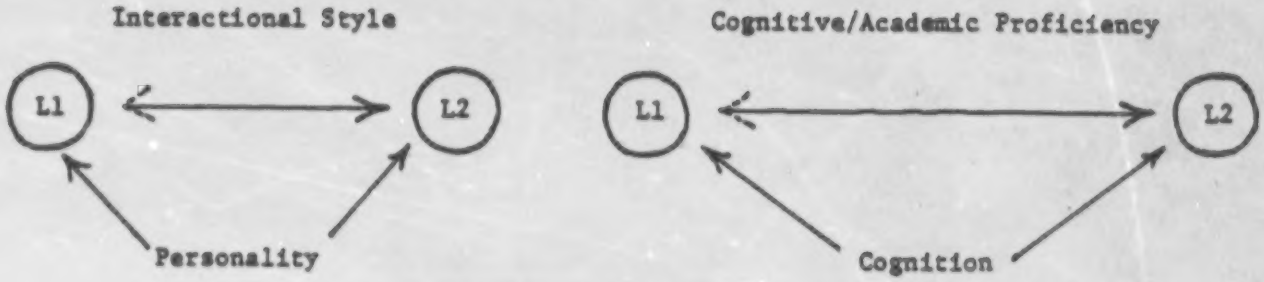

Figure 2: Model of Attribute-Based Interdependent Language Proficiency

more variation on EFAC2 and EFAC3 than on EFAC1, whereas exposure and behavior related to L2 acquisition was more powerful in predicting EFAC1 than EFAC2 and EFAC3.

The model outlined in Figure 2 also allows for the possibility that acquisition of L2 proficiency can affect (probably in subtle ways) manifestations and/or development of L1 proficiency. This would be consistent with, for example, findings of greater metalinguistic awareness among bilingual children (see Cummins, 1981b for a review).

Conclusion

The present study has provided strong support for the interdependence hypothesis and thus, indirectly, for a central theoretical principle underlying bilingual education.

In relation to the nature and assessment of language proficiency the major implications are that the construct of proficiency is not unitary and that traditional distinctions and modes of assessment (e.g. listening, speaking, reading and writing) may be less fundamental than distinctions related to the context in which the communicative activity takes place (i.e. context-embedded vs. context-reduced) and the extent to which communicative performance is determined by relatively stable attributes of the individual.

FOOTNOTES

1. In the remainer of this report the term "context-reduced" will be used interchangeably with the term "cognitive/academic" to refer to language proficiencies located in quadrant D of Figure 1.

2. In addition to academic reentry problems, returning children also face problems in terms of conflicting sociocultural and sociolinguistic expectations. For example, Koboyashi (1978) has reported that overseas children, especially those who have returned from North America, are often considered as too aggressive and self-assertive, although open and friendly. Sekiguchi (1979) has reported that the most persistent difficulty for returning children to overcome in readapting to the Japanese education system relates to mastery of sociolinguistic aspects of Japanese, e.g. appropriateness, speech styles (male or female), registers, politeness, sensitivity to nonverbal cues etc. It is not surprising that overseas children experience this type of difficulty since mastery requires exposure to the language for a considerable period of time in a wider community than the home.

3. We would like to thank Professor Nguyen Dinh Hoa, Mr. Tran Turng Lyong, Mr. Huyn Huu Tho and Ms. Xuan Tran for their advice on the construction of the Vietnamese Antonyms test.

4. Subsequent factor analyses with both orthogonal and oblique rotations using the EFAP II program resulted in basically the same three factors. The correlations among the three oblique factors were in the .5 - .7 range.

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APPENDIX 1

RESPONSES TO PARENTS' QUESTIONNAIRE (JAPANESE STUDY)

A. CHILD ATTRIBUTES

1. SEX	male	55%
	female	45%
2. AGE (as of June, 1981)	months 116.1 (SD: 19.1)	
3. GRADE IN CANADIAN SCHOOL (as of June, 1981)	grade 1	5%
	grade 2	27%
	grade 3	18%
	grade 4	2%
	grade 5	38%
	grade 6	11%
4. LENGTH OF RESIDENCE IN ENGLISH-SPEAKING COUNTRY (after age 3 years)	months 35.7 (SD: 22.0)	
5. AGE ON ARRIVAL IN ENGLISH-SPEAKING COUNTRY	months 79.5 (SD: 28.1)	
6. CHILD'S PERSONALITY	very shy	4%
	somewhat shy	36%
	about average	38%
	somewhat outgoing	14%
	very outgoing	5%

B. SCHOOL EXPERIENCE ON ARRIVAL

7. DID CHILD HAVE PROBLEMS IN ADJUSTING TO CANADIAN SCHOOL	yes	16%
	no	84%
8. HOW LONG DID IT TAKE CHILD TO MAKE CANADIAN FRIENDS	within 1 month	42%
	1-3 months	23%
	4-6 months	28%
	>6 months	8%
9. HOW LONG DID IT TAKE CHILD TO FOLLOW ENGLISH INSTRUCTIONS IN CANADIAN SCHOOL	1-6 months	41%
	7-12 months	33%
	>12 months	25%
10. DID CHILD RECEIVE ESL ASSISTANCE	no	32%
	yes, all day class	2%
	yes, withdrawal	55%
	yes, other	11%

C. PRESENT SCHOOL EXPERIENCE AND ATTITUDE

11. CHILD'S MATH ACHIEVEMENT IN CANADIAN SCHOOL	very well	80%
	well	9%
	adequately	11%
	needs effort	
	slow due to language	
12. CHILD'S READING ACHIEVEMENT IN CANADIAN SCHOOL	very well	30%
	well	13%
	adequately	32%
	needs effort	16%
	slow due to language	9%
13. CHILD'S OPINION OF ENGLISH AND JAPANESE SCHOOLS	likes J > E	18%
	likes J < E	41%
	likes both	30%
	neutral to both	9%
	dislikes both	1%

D. PARENT-RELATED LANGUAGE BEHAVIOR

14. WHAT LANGUAGE IS SPOKEN BY PARENTS TO CHILD	all Japanese	80%
	mostly Japanese	20%
	about equal	
	mostly English	
	all English	
15. WHAT LANGUAGE IS SPOKEN BY CHILD TO PARENTS	all Japanese	46%
	mostly Japanese	45%
	about equal	5%
	mostly English	2%
	all English	2%
16. PARENT REACTION TO CHILD'S ENGLISH	answer in English	6%
	answer in Japanese	53%
	request use Japanese	42%

E. CHILD LANGUAGE USE AND PREFERENCE

17. WHICH LANGUAGE DOES THE CHILD PREFER	English	27%
	Japanese	50%
	both	23%
18. DOES CHILD MAKE ERRORS IN SPOKEN JAPANESE	yes	55%
	no	34%
	don't notice	11%

19. WHAT LANGUAGE IS SPOKEN BY CHILD TO SIBLINGS	all Japanese	20%
	mostly Japanese	43%
	about equal	14%
	mostly English	14%
	all English	7%
20. WHAT LANGUAGE IS SPOKEN BY CHILD TO CANADIAN FRIENDS	all Japanese	
	mostly Japanese	2%
	about equal	
	mostly English	9%
	all English	84%
21. WHAT LANGUAGE IS SPOKEN BY CHILD TO JAPANESE FRIENDS	all Japanese	32%
	mostly Japanese	34%
	about equal	14%
	mostly English	20%
	all English	
22. HOW OFTEN DOES CHILD PLAY WITH JAPANESE AND CANADIAN FRIENDS	J much more often	14%
	J somewhat more often	29%
	J & C equally	27%
	C somewhat more often	23%
	C much more often	5%

F. ADDITIONAL EXPOSURE TO JAPANESE AND ENGLISH

23. VISITS TO JAPAN SINCE COMING TO CANADA	none	70%
	one	23%
	more than one	7%
24. ADDITIONAL EFFORTS TO DEVELOP CHILD'S JAPANESE ACADEMIC SKILLS	(a) correspondence courses	52%
	(b) parent's (usually mother's) help	48%
	(c) use of audio and video tapes	46%
	(d) buy Japanese books, magazines etc.	32%
	(e) Japanese academic workshops ("training papers")	22%
	(f) hire private tutor	11%
	(g) send child to Japan for summer	9%
	(h) nothing in particular	5%

25. ADDITIONAL EFFORTS TO DEVELOP CHILD'S ENGLISH SKILLS	(a) send to summer camps, ESL summer school etc.	55%
	(b) send to social activities such as sports classes	34%
	(c) provide books, magazines etc.	27%
	(d) hire private tutor	20%
	(e) parent's help	14%
	(f) use TV programs, tapes etc.	11%
	(g) nothing in particular	25%
26. HOW MANY DAYS PER WEEK DOES CHILD STUDY JAPANESE	everyday	29%
	6-5 days	32%
	4-3 days	34%
	2-1 days	5%
27. HOW MANY HOURS PER WEEK DOES CHILD STUDY JAPANESE	1-2 hours	7%
	3-4 hours	23%
	5-6 hours	29%
	7-8 hours	14%
	9-10 hours	13%
	>10 hours	14%
28. HOW OFTEN DOES CHILD STUDY REGULAR SCHOOL WORK AT HOME	never	27%
	occasionally	38%
	sometimes	30%
	a lot	5%
29. HOW MUCH TV DOES THE CHILD WATCH PER DAY	≤1 hour per day	59%
	>1 hour per day	41%
30. HOW MANY JAPANESE BOOKS DOES THE CHILD READ PER MONTH (excluding textbooks)	none	7%
	1-2	36%
	3-4	27%
	5-6	13%
	7-9	10%
	≥10	7%
31. HOW MANY ENGLISH BOOKS DOES CHILD READ PER MONTH (excluding textbooks)	none	21%
	1-2	38%
	3-4	27%
	≥5	13%

32. WHICH BOOKS DOES CHILD PREFER TO READ	Japanese	52%
	English	29%
	both	20%
G. PARENT BACKGROUND		
33. FATHER'S AGE	20's	
	30's	42%
	40's	53%
	50's	3%
34. MOTHER'S AGE	20's	2%
	30's	80%
	40's	15%
	50's	2%
35. FATHER'S OCCUPATION	trading company	27%
	manufacture	42%
	bank	8%
	journalism	3%
	government	7%
	university	5%
	self-employed	2%
	other	5%
36. MOTHER'S OCCUPATION	housewife	93%
	other	7%
37. FATHER'S EDUCATION (highest level)	compulsory education	
	high school	5%
	junior college	
	university under-graduate degree	83%
	university graduate degree	10%
38. MOTHER'S EDUCATION	compulsory education	2%
	high school	17%
	junior college	56%
	undergraduate degree	20%
	graduate degree	3%
39. FATHER's ENGLISH DIFFICULTY	no difficulty	54%
	sometimes	34%
	often	10%
40. MOTHER'S ENGLISH DIFFICULTY	no difficulty	17%
	sometimes	20%
	often	61%

41. PARENT ASPIRATIONS FOR CHILD'S FURTHER EDUCATION	junior college	5%
	university	81%
	graduate school	5%
	other	7%
42. DESIRED LOCATION OF JUNIOR HIGH SCHOOL EDUCATION	Japan	69%
	overseas	3%
	either	27%
43. DESIRED LOCATION OF HIGH SCHOOL EDUCATION	Japan	81%
	overseas	5%
	either	14%
44. DESIRED LOCATION OF UNIVERSITY EDUCATION	Japan	51%
	overseas	10%
	either	37%
45. WHO MAKES DECISIONS REGARDING CHILD'S EDUCATION	father	22%
	mother	
	both	78%
46. HOW MUCH DID THE MOVE TO CANADA AFFECT THE FAMILY'S WAY OF LIFE (Followed by open-ended questions about ways in which move changed way of life, child-rearing practices, desire to stay in Canada, Canadian schools, and advice for Japanese families coming to Canada (see Appendix 6).	very much	34%
	somewhat	51%
	not at all	15%

APPENDIX 2

ANTONYMS, SENTENCE REPETITION, AND PREPOSITIONAL USAGE TESTS

(JAPANESE STUDY)

Antonyms Test (Adapted from the LAU (Cohen, 1980))

1. HOT
   Correct: cold, chilly, freezing, snowy
2. HAPPY
   Correct: sad, mad, unhappy, crying, frown, depressed
3. NIGHT
   Correct: day, light, bright, daylight, white, clear, sunny, sunshine, morning
4. OLD
   Correct: new, young, baby, child
5. NOISY
   Correct: soft, low, quiet, calm
6. CLEAN
   Correct: dirty, filthy, dusty, messy
7. SMART
   Correct: dumb, idiot, slow, bad
8. HEALTHY
   Correct: sick, ill, frail, weak
9. ASLEEP
   Correct: wake, moving, alive, doing
10. LOVE
    Correct: hate, dislike, war, fight
11. BEGIN
    Correct: finish, end, complete, stop
12. SWEET
    Correct: sour, bitter, tasteless, nasty, bad, cruel, mean, salt
13. SMOOTH
    Correct: sharp, rough, tremble
14. TOGETHER
    Correct: alone, solo, apart, separate, away
15. TAKE
    Correct: give, pat, donate, contribute, return, put
16. TRUTH
    Correct: lie, cheat, story, fib
17. PUSH
    Correct: pull, tug, carry
18. SHRINK
    Correct: grow, swell, enlarge, stretch, mature
19. SELFISH
    Correct: sharing, generous, benevolent, giving
20. POLITE
    Correct: rude, discourteous, disrespectful, mean, inconsiderate, thoughtless, unkind, brash. (If 'impolite' or 'selfish' are given, ask for another word.)

Sentence Repetition Test (Adapted from the LAU (Cohen, 1980))

1. Tall tree.
2. Big girl.
3. Pink cheek.
4. Red book.
5. The tree is green.
6. The pen is blue.
7. The boy went to school.
8. The teacher has five books.
9. Mother cleans the big kitchen floor.
10. Trucks can go to different places every day.
11. The teacher uses chalk to write on the board.
12. My friends like to go swimming at the big beach.
13. I like to fly a big kite on a very windy day.
14. I can use a crayon to draw a picture on white paper.
15. In the afternoon, there are many children playing in the schoolyard.
16. My pencils keep falling through the hole in my old school bag.
17. The sun was so bright that I thought I saw diamonds dancing on the sparkling water.
18. We can see so many stars on a clear night that the sky looks like a Christmas tree.

PREPOSITIONAL USAGE TEST

(FROM WRIGHT AND RAMSEY, 1970)

Name _____

Age _____

Fill in the Blanks Test

In this test, you will be shown sentences in which a word is missing. There are four choices for each sentence. You must pick out the word which is right for each sentence and then write it in the blank space. Look at the example below.

1. It's time _____ bed.

A. for
B. after
C. out
D. along

1. I don't agree _____ you.

2. Take the book _____ the torn pages.

3. He is _____ board a ship.

4. She talks a lot _____ nonsense.

5. _____ second thought, I stayed home.

6. He led her _____ her arm.

7. He went _____ no hat on.

A. on
B. by
C. with
D. of

8. In the morning, birds are up _____ six.

9. He is the Member _____ Parliament.

10. I was down _____ a fever.

11. Switch _____ the lights.

12. He is free _____ pain.

STOP

WAIT FOR DIRECTIONS

APPENDIX 3

ENGLISH INTERVIEW TASKS AND SCORING PROCEDURES

(JAPANESE STUDY)

ENGLISH INTERVIEW TASKS AND SCORING PROCEDURES (JAPANESE STUDY)

The interviews were all carried out by the same interviewer (Daina Green) in the homes of the subjects. In some cases, non-participating siblings were present, and in a few cases the subject's mother remained in the room. All interviews were tape recorded, using a lapel mike fastened to the child's clothing. The interview consisted of four parts designed to make different interactional and linguistic demands on the child.

A. The interview began with a free-form conversation initiated by the interviewer. Where topics were not forthcoming from the child, the interviewer inquired about his or her length of residence in Canada, impression of Japan, school attended, preferred activities. The conversation lasted up to ten minutes.

B. Two toy telephones were produced. The interviewer first instructed the child to "pretend it's a real call and I'm calling your house." Then the interviewer dialed and asked to speak with the father, who was, in fact, not at home. The child was asked to take a message. The second call made by the interviewer was a "wrong number". The third task required the child to place a call to a movie theatre and ask three questions which were explained in advance: what time the movie started, the price of the tickets, and the location of the theatre. When children forgot one of the questions they were prompted, since language rather than memory was the focus of the procedure.

C. Six pictures representing a family outing were given to the child

in random order. The interviewer asked the child to "put the cards in the right order, and tell the story". The interviewer only interrupted the child's narrative if the child skipped a picture or if, in the first two pictures, the child's description was judged to be too general. In either of these cases, the interviewer intervened by calling the child's attention to specific parts of the picture which the child had failed to mention. Again, the point of asking the child to put the pictures in the right order was not to test cognitive functions but to ensure that the child studied the pictures closely prior to describing the story.

D. The stimulus for the final interview task was a cartoon picture of two children on a raft. The picture proved very appealing to the children and also gave rise to explanations of certain features that either have no easy names in English, or which require specialized vocabulary (i.e., a fish-catching machine, a telescope, rowing, crab, raft, an oil barrel). The children were asked, "What are these kids doing? Tell me what's going on."

Following these four tasks, the antonyms and sentence repetition measures were administered to the child.

Scoring Procedures (See Appendix 4 for actual scales)

Specific procedures for scoring the interviews were drawn up after the interviews had all been completed. The different tasks were scored separately, in the sequence presented. Rather than using overall 5-point rating schemes for grammar, pronunciation etc. which would be applied indiscriminately to the different parts of the interview, we attempted to select the interactional requirements of the different parts in the scoring procedures. In doing this we were guided by the Canale & Swain (1980) model of communicative competence and specifically attempted to assess

sociolinguistic and strategic competence where appropriate.

The specific rationales and procedures for scoring the 16 scales are described below and the actual scales are also presented. These procedures were drawn up after listening to approximately 25% of the interviews in order to determine the specific interactional requirements of the different tasks and the extent to which these could be assessed from the tapes. Obviously, the interviewer's experience in administering the interviews was also used in determining rating scales. After the initial development of these scales they were tried out and refined by the investigators.

A. In scoring the various aspects of the informal conversation, both the speech of the interviewer and child were taken into account.

1. The student's mastery of the phonemes of English in running speech was rated. Although prosodic features (e.g. intonation and stress) were not specifically rated,we would expect development of these features to match phonological approximation.

2. The interviewer's intuition about the child's receptive ability (comprehension) is reflected in the rate of speech and level of structural complexity she uses with the child. This is valuable information in scoring from tape, since the interviewer may respond to visual and other non-verbal cues which cannot be detected on the tape.

3. The child's comprehension can be inferred from his or her response to the interviewer's comments and questions. On this measure, the child's lexical and syntactic confusions may give rise to inappropriate responses. Even natively English-speaking children may occasionally misunderstand an unfamiliar or too-rapid question, but such a misunderstanding is usually cleared up in the following exchanges. The child who fails to observe

incongruities, or who cannot make use of the normal redundancies of conversation to clear up misunderstandings may be evidencing problems in comprehension.

4. This scale relates to the amount of information the child conveys. It is a combination of total quantity of output and also the quality and accuracy of the vocabulary used. Use of detail is scored, as well as use of precise vocabulary instead of general terms.

5. A common problem for Japanese speakers learning English is the appropriate use of verbal inflections and plural markers. The frequency of deviation is rated on this scale.

6. Article use was likewise a frequent problem for the experimental sample. Omissions of articles and uses of superfluous articles were calculated.

7. In this measure of mastery of syntactic structures, both the level of sophistication attempted and the failures in syntactic use were evaluated together. That is, in the case of two children who made the same number of errors in the conversation, one child may have made all errors in "difficult" or more advanced (in terms of developmental order of acquisition) structures, and the other's errors may be found in the use of elementary syntax. The child with errors in the most basic structures may or may not attempt more complex structures. Thus, willingness to take risks and actual success are both measured on this scale. The definition of complexity has been made intuitively in these ratings, referring broadly to use of relative clauses, compound subjects and predicates, and differentiated use of verb tenses and modals.

8. The final rating for the informal conversation dealt with the interviewer's perception of the child's feeling of ease in the interview situation. It

should be noted that it is culturally appropriate for a Japanese child to act in a reserved and quiet manner with adults. The rating (0) Extremely reserved and shy is the category corresponding to children who are judged to be more aloof or "shy" than culture demands.

B.9. The third telephone task required the child to ask three questions about a movie showing. The syntactic formation of these questions was rated in terms of number of structural errors in the three questions.

10. This scale refers to use of appropriate greeting, leavetaking, and identification in the context of telephone conversations. It is not appropriate, for example, to answer the phone with the phrase, "Who is it?", although this is an acceptable response to a knock on the door.

C. Response to the 6-picture stimulus cards was relatively predictable. Certain structures were elicited almost unfailingly, and certain tense use was favoured. This stability made syntactic aberrations easier to judge.

11. This scale is slightly less complex than the one used for the informal conversation in accordance with the more restricted syntactic demands of the task.

12. The student's success in making the description of six pictures into a cohesive story is measured here in terms of two common devices: use of anaphoric pronouns to describe the characters named in the first frame, and the use of logical and structural connectors such as first, and then, after lunch, when they got back home, etc. Some children attempted to use pronouns but used them inconsistently and without proper antecedents, others used a few connectors while describing other frames in isolation.

13. The task allowed for some projection on the part of the subject. Some students elaborated at great length, others tended to overgeneralize. For example, one student said that in frame 5 "everybody playing" while another said, "Mrs. Smith is tidying up while the father is watching Ronald do handstands." In this measure, both vocabulary use and imagination come into play.

D. The final task was more evocative in terms of children's projections, given that the situation presented is unusual and could be explained in several equally logical ways.

14. The task required mostly present tense explanations, and relatively short simple sentences. The syntactic scale used here was the same one used in (11) above.

15. As noted, the unusual vocabulary often required children to explain and paraphrase the actions and objects represented in the drawing. The degree of accuracy achieved by the child through paraphrase is measured.

16. The scale used to evaluare communication of detail in the 6-picture task (13) was also used here.

APPENDIX 4

INTERVIEW SCORING SCALES FOR JAPANESE AND VIETNAMESE STUDENTS

ENGLISH INTERVIEW SCORING (JAPANESE STUDY)

A. INFORMAL CONVERSATION

1. Pronunciation
   (0) hard to understand
   (1) not native-like, but intelligible
   (2) like native, except for 3 - 5 phonemes
   (3) like native, except for 1 - 2 phonemes
   (4) like native

2. Appropriate response to interviewer's questions and statements:
   Interviewer speech
   (0) tendency to paraphrase
   (1) slower and simplified
   (2) at normal rate and of normal complexity

3. Production of appropriate responses
   (0) many responses semantically inappropriate
   (1) a few responses inappropriate
   (2) all responses semantically appropriate (with normal feedback)

4. Richness of information communicated (vocabulary and information)
   (0) many answers incomplete, monosyllabic, or unelaborated
   (1) answers adequately, with some detail
   (2) answers elaborately, with detail and specific vocabulary

5. Inflections of verbs and nouns
   (0) many errors
   (1) occasional errors
   (2) no errors

6. Article use
   (0) many articles omitted or used superfluously
   (1) a few omitted or superfluous articles
   (2) no errors in article use

7. Syntactic structure sophistication
   (0) generally non-standard use of simple syntax, few elaborate structures attempted
   (1) few complex structures, many errors in simple syntax
   (2) uses few complex structures, few errors in simple syntax
   (3) uses some complex structures (and modals), makes few errors in simple syntax
   (4) native like use of syntactic structures

8. Ease
   (0) extremely reserved or shy
   (1) reserved but cooperative
   (2) clearly at ease

B. TELEPHONE TASK

9. Question formation
   (0) more than 2 errors
   (1) one or two errors
   (2) all questions well-formed

10. Use of sociolinguistically appropriate forms
   (0) many inappropriate forms
   (1) some inappropriate forms
   (2) all forms used appropriate

C. PICTURE SEQUENCE NARRATION

11. Syntactic structures
   (0) simple syntax, many errors
   (1) few complex structures,few errors in simple syntax
   (2) some complex structures, few errors in simple sytax
   (3) native like use of syntactic structures

12. Use of connectors and anaphor for cohesion
   (0) no connectors or anaphoric use
   (1) some attempt at cohesion
   (2) uses connector and anaphor: a story

13. Richness of detail (vocabulary and imagination)
   (0) little detail
   (1) some detail
   (2) much detail

D. PICTURE EXPLANATION

14. Syntactic structures
   (0) simple syntax, many errors
   (1) few complex structures, few errors in simple syntax
   (2) some complex structures, few errors in simple syntax
   (3) native-like use of syntactic structures

15. Strategy
   (0) gives up when can't explain
   (1) approximative circumlocutions, gets basic point across, compromises
   (2) explains adequately where lacking specific vocabulary, or asks
   (3) all vocabulary adequate

16. Richness of detail
   (0) little detail
   (1) some detail
   (2) much detail

JAPANESE INTERVIEW SCORING.

A. FREE CONVERSATION

1. Pronunciation and intonation

(0) strong English accent and intonation
(1) like native except for 3-5 non-standard sounds
(2) like native except for 1 or 2 non-standard sounds
(3) sounds like a Japanese child in Japan

2. Modifications of interviewer's speech

(0) interviewer repeats
(1) interviewer paraphrases
(2) interviewer speaks at normal rate using normally complex language

3. Richness of information communicated (vocabulary and information)

(0) many answers incomplete, monosyllabic or unelaborated
(1) answers adequately, with some detail
(2) answers elaborately, with detail and specific vocabulary

4. Use of English on the lexical and syntactic levels

(0) on many occasions, uses a combination of English and Japanese
(1) a few occurrences of combining English with Japanese
(2) no use of English in speaking Japanese

5. Fluency

(0) extremely laboured
(1) some lack of fluency
(2) native-like fluency

6. Non-response

(0) more than three non-responses (silence) or "don't know" or irrelevant responses
(1) one to three non-responses or "don't know"
(2) responded to all questions

7. Level of syntactic sophistication

(0) fragmentary, word-level responses
(1) less sophisticated syntactic structures
(2) sophisticated structures

8. Ease

(0) extremely reserved or uncooperative
(1) reserved but cooperative
(2) clearly at ease

B. TELEPHONE TASKS

9. Ability to follow directions

(0) gives up, does not attempt task
(1) carries out part of the task
(2) asks for clarification or help, then carries out the task
(3) carries out the entire task appropriately

10. Use of sociolinguistically appropriate forms

(0) no use of sociolinguistically appropriate forms
(1) some attempts to produce appropriate forms
(2) considerable awareness and some appropriate use of sociolinguistically appropriate forms

C. PICTURE SEQUENCE NARRATION

11. Richness of detail

(0) little detail
(1) some detail
(2) much detail

ENGLISH INTERVIEW SCORING (VIETNAMESE SUBJECTS)

INFORMATION

1. Name _____
2. Date of interview _____
3. Sex M = 1 _____
4. When arrived in Canada _____
5. Last grade completed in Vietnam _____
6. Country of refugee camp _____
7. Time spent in camp _____
8. Study English in camp Yes = 1 _____

COMMENTS

_____

_____

_____

_____

_____

FREE CONVERSATION

1. Pronunciation

(0) very hard to understand
(1) leaves off many final consonants and distorts vowels, but generally intelligible
(2) very intelligible, still errors
(3) occasional errors only
(4) native-like

2. Production of appropriate responses

(0) many responses semantically inappropriate
(1) a few responses inappropriate
(2) all responses semantically appropriate (with normal feedback)

3. Richness of information communicated (vocabulary and information)

(0) many answers incomplete, monosyllabic, or unelaborated
(1) answers adequately, with some detail
(2) answers elaborately, with detail and specific vocabulary

11. Syntactic accuracy

(0) generally non-standard use
(1) many errors
(2) a few errors
(3) native-like syntactic accuracy

12. Use of connectors and anaphor for cohesion

(0) no connectors or anaphoric use
(1) some attempt at cohesion
(2) uses connector and anaphor: a story

13. Richness of detail (vocabulary and imagination)

(0) little detail
(1) some detail
(2) much detail

14. Strategy (communication)

(0) gives up when can't explain
(1) approximative circumlocutions, gets basic point across, compromises
(2) explains adequately where lacking specific vocabulary, or asks
(3) all vocabulary adequate

15. Strategy (receptive)

(0) doesn't ask for clarification, problems result
(1) shows lack of comprehension, gets some clarification
(2) requests clarification directly, comprehension problems overcome
(9) no need for receptive strategies

APPENDIX 5

ANTONYMS AND CLOZE TESTS

(VIETNAMESE STUDY)

VIETNAMESE ANTONYMS

1. Vui _____
2. Đầy _____
3. Trẽ _____
4. Ồn ào _____
5. Đầy _____
6. Mạnh mẽ _____
7. Giống nhau _____
8. Cho _____
9. Thua _____
10. Tối _____
11. Đẹp _____
12. Dầy _____
13. Chua _____
14. Cười _____
15. Bắt đầu _____
16. Người lớn _____
17. Chung _____
18. Nặng _____
19. Chật _____
20. Khôn _____
21. Mắc _____
22. Láng mướt _____
23. Cạn _____
24. Chiến tranh _____
25. Vô lễ _____
26. Phá hủy _____
27. Khiêm nhường _____
28. Nguy hiểm _____
29. Vĩnh viễn _____
30. Từ chối _____
31. Mơ hồ _____
32. Thành công _____
33. Tối đa _____
34. Hỗn độn _____
35. Đoàn kết _____
36. Cẩn thận _____
37. Độc ác _____
38. Phức tạp _____
39. Khan hiếm _____
40. Tự do _____

ENGLISH ANTONYMS

1. Hot . . . . . .
2. Young . . . . . .
3. Clean . . . . . .
4. Noisy . . . . . .
5. Rich . . . . . .
6. Late . . . . . .
7. Near . . . . . .
8. Happy . . . . . .
9. Push . . . . . .
10. Remember . . . . . .
11. Soft . . . . . .
12. Full . . . . . .
13. Love . . . . . .
14. Strong . . . . . .
15. Night . . . . . .
16. Same . . . . . .
17. Give . . . . . .
18. Difficult . . . . . .
19. Win . . . . . .
20. Dark . . . . . .
21. Pretty . . . . . .
22. Thick . . . . . .
23. Sour . . . . . .
24. Laugh . . . . . .
25. Begin . . . . . .
26. Adult . . . . . .
27. Together . . . . . .
28. Heavy . . . . . .
29. Tight . . . . . .
30. Clever . . . . . .
31. Expensive . . . . . .
32. Smooth . . . . . .
33. Deep . . . . . .
34. War . . . . . .
35. Rude . . . . . .
36. Destroy . . . . . .
37. Modest . . . . . .
38. Dangerous . . . . . .
39. Permanent . . . . . .
40. Refuse . . . . . .

Tại Sao Lông Cọp Có Vằn ?

Ngày xưa có một anh nông dân đang cày ruộng với con trâu ngoài đồng. Vì cánh đồng anh ta gần núi nên có một con cọp xuất hiện và tiến lại gần anh và hỏi anh:

- Anh và con trâu, ai mạnh _____?
- Con trâu mạnh hơn.
- Sao con _____ mạnhhơn anh lại phục tùng _____?
- Bởi vì tôi có trí thông _____.
- Trí thông-minh của anh đâu? _____ tôi xem nào?
- Tôi để ở _____.
- Anh về nhà lấy đem ra _____ tôi xem.

Anh nông-dân suy _____ giây lát rồi nói:

- Nếu tôi _____ nhà anh ăn mất trâu tôi _____?
- Không dàu. Tôi không ấn trâu _____ đâu vì tôi muốn xem trí _____ minh của anh.
- Vậy thì để _____ cột anh vào cái cây dang _____ trước đã rồi tôi mới đi _____ nhà.

Con cọp bằng lòng. Anh _____ dân liền buộc con cọp vào _____ cây gần đó. Anh ta quấn _____ vòng cho chắc chắn. Sau đo _____ ta đi vào trong căn nhà _____ đo. Lát sau anh ta trở _____ tay cầm que củi có lửa _____ nói với con cọp rằng:

- Trí thông-minh của tôi đây.

Nói vừa xong thì anh nông dân châm lửa đốt con cọp. Nó cố vùng vẫy để thoát thân. Nó giận hết sức. Đến khi sợi giây cháy hết nó mới chạy thoát được. Lông con cọp từ đó có vằn là do sợi giây thừng bị cháy để dàu lại.

KHOA-HỌC PHỎNG THEO TẠO-VẬT

Có khi nào bạn cảm thấy một con dơi bay vụt ngang mặt bạn trong đêm tối, chỉ cách bạn trong đường tơ kẻ tóc; hay thấy một con cóc nhanh như chớp thè lưỡi ra đớp một con mồi bay qua? Chắc bạn sẽ tự hỏi làm thế nào con dơi khám-phá được các vật chung quanh nó trong đêm tối, mắt của con cóc được cấu-tạo thế nào mà có thể theo dõi con mồi di-động nhanh như vậy?

Ngày nay các khoa-hoc-gia _____ thấy rằng tìm được giải đáp _____ những câu hỏi trên có thể _____ đến các phát-minh quan-trọng. _____ nghiên-cứu các sinh-vật như _____, dơi, muỗi ...Chẳng hạn như họ _____-phá ra là con dơi xử-_____ âm-thanh, chứ không phải thị-_____ để tìm ra đường bay của _____. Dơi có thể bay xuyên qua _____ phòng tối có giăng chằng chịt _____ dây đàn dương cầm mà không _____ sợi nào. Khi bay dơi phát _____ âm-thanh có cường-độ cao _____ đối tai con người không nghe _____. Những âm-thanh này dội lại _____ các sợi dây đàn và các _____ khác trong phòng. Nhờ tiếng dội _____ mà con dơi có thể định _____ vị-trí các vật-thể chung _____. "Bộ máy" của con dơi đã _____ các khoa-hoc-gia phát minh _____ ra-đa. Nó cũng còn giúp _____-minh máy sô-na, một loại _____ dùng để định vị-trí của _____ ngầm và các vật khác ở _____ nước. Nhưng máy sô-na và _____ ra-đa nhân-tạo không chắc _____ đã tinh-vi bằng bộ máy _____ con dơi!

Các khoa-hoc-gia cũng còn chú-tâm đến khả-năng khứu-giác của động-vật. Họ đã chế-tạo máy có "mũi" rất thính "ngửi" được các mùi chỉ phăng-phất trong không-gian. Các loại máy như thế giúp chúng ta biết ngay mỗi khi thực-phẩm bắt đầu hư thối hay trường-hợp có hơi độc trong không-khí. Các loại máy này cũng giúp các bác-sĩ khám-phá ra được bịnh trạng.

Nhờ nghiên-cứu và phỏng theo các bộ máy tạo-hóa mà các khoa-học-gia tiếp-tục phát-minh được nhiều máy móc kỳ-diệu.

APPENDIX 6

EFFECTS OF OVERSEAS EXPERIENCE ON JAPANESE FAMILY ENVIRONMENT

(FROM RESPONSES TO OPEN-ENDED QUESTIONS IN PARENT QUESTIONNAIRE)

Effects of Overseas Experience on Japanese Family Environment

A large majority (85%) of parents reported some changes in family life to which they had to adjust upon moving to Canada. These changes can be grouped under the following five headings:

(a) change in general life style
(b) social interactions
(c) parental roles vis-a-vis child's education
(d) home language
(e) discipline

Change in General Life Style

(i) most of the families enjoy additional income because of their new posting and new responsibility in a foreign country. They can thus afford to live in a house or a luxurious high-rise apartment. This contrasts with the very bad housing situation in Japan where houses and apartments are very much smaller.

(ii) Mothers, in spite of the language barrier, find Canadian life more enjoyable for several reasons:

(a) practical conveniences in daily life, e.g. shopping, electric appliances, space, modern houses, etc.
(b) freedom to develop their own interests and more opportunities to do so (e.g. attending classes at YWCA or community colleges). This type of freedom and opportunities are given to house-wives in Japan to a much lesser extent. They are expected to stay home and look after the children.
(c) They feel less pressure from the community and the neighbourhood. Since child rearing and the success of their children in school-related activities are solely the responsiblity of mothers in Japan, they are under more pressure in trying to meet the expectations of their husbands, relatives and the neighbours.
(d) They have opportunities to go out with their husbands for social gatherings. In Japan, men do not accompany their wives on these occasions. Many mothers enjoy these opportunities but some do not; they complain that they have less time for children.

(iii) Fathers, on the other hand, have ambivalent feelings about living in Canada:

(a) They are under pressure because of the heavier responsibility in a foreign office. They must operate in a foreign environment with less linguistic and cultural knowledge.

(b) Coming from an extremely hierarchical and achievement-oriented society, they feel uneasy about being posted overseas in a country which is not necessarily in the mainstream.

(c) They enjoy shorter working hours and more time to spend with their family. In Japan most white collar workers leave early in the morning and come home close to midnight. It is common to spend about three hours commuting and also to spend some time after the office is closed for informal get-togethers, where most of the important business negotiations are made. Greater contact with their children is facilitated in Canada by the fact that, as a result of less demanding school work, children have more time for extracurricular activities.

Because of these ambivalent feelings, more fathers than mothers in our sample wanted to return to Japan. (These data for the most part represent the mother's reporting of the father's wishes.) Of those who expressed a preference, 64% of mothers wanted to stay in Canada compared to 17% who wanted to return to Japan. Fifty per cent of fathers wanted to remain, while 31% wanted to return.

Social Interactions

Interactions among family members have increased greatly in quantity and also in quality. It is still commonly practiced in Japan that grandparents live with the first son's family, but when the family move to a foreign country, they come as a nuclear family. This improves the relationships between wife and husband, and parents and children, especially father and children, which is a welcome change to many families. However, from the children's point of view, when they come to Canada they leave behind grandparents, relatives, friends, sometimes older brothers and sisters who are attending universities in Japan, neighbours, pets, in short, all that they love.

Although the move to Canada has meant more family activities (e.g. trips, sports, parties, etc.) for most families, some families (four respondents) reported that there is now less opportunity for family interaction because of the father's business trips and demanding work as well as the mother's special duties.

The Japanese-speaking adults whom children have the opportunity to meet in Canada tend to be homogeneous in terms of work, SES, age, educational background, and family composition. Children have less chance to meet a greater variety of people, sick or old, poor or rich. Children also have little opportunity to interact with older teenagers or young adults since these do not normally accompany the family in its move abroad.

Parental Roles Vis-a-Vis Child's Education

In Japan, because of the long working hours and short weekend (only half-day on Saturdays and whole day on Sunday), the father's role in a family is as an income source, and although fathers themselves think that they are in control of family affairs, in reality, mothers deal with educational issues, choosing the right school for the child, making sure she/he does well at school, attending parents' meeting, etc. Overseas experience seems to radically change these traditional father-mother roles.

Mainly because of insufficient English proficiency and lack of experience in a foreign country on the part of the mother, fathers are thrown into a situation where they are responsible for the schooling of their children, not only in principle but also in practice, whether they want it or not. Some fathers even attend the parent meetings and help their children do their homework for the regular Canadian school.

However, the father's increased role in the child's schooling sometimes threatens the mother's status within the family, especially when she is less skilled in English and has a lower educational background. Mothers may have less say in the child's school work, which can result in poor discipline and less parental control over the child's language use and behavior in the home.

Traditionally the father's status is higher than the mother's in a Japanese family, a fact which is reflected in the parents' questionnaire to some extent. Decisions on the child's schooling are made by Father (22%), or by both Father and Mother (78%) and none by Mother only.

In Japan, the child exists to a certain extent as an extension of the mother's ego. When the child does not do well at school, the mother feels ashamed as if it were she that does not do well at school. The child's success is the mother's success. This type of involvement of the mother in the child's school work still continues in coping with the school work in the Japanese language school which is heavily dependent on homework during the week.

By contrast to this involvement, parents do not seem to be well-informed of the school work at the local public schools. Many of them are satisfied with local schools, but they complain that it is difficult to know what is going on in the school because the child does not bring home textbooks or a notebook or homework. The feedback from the teacher as to to child's progress in the school is also much less than what they get in Japan. It is difficult for parents to get involved in the child's school work in the Canadian schools. In fact the involvement which some parents have had may have been counterproductive. At a "debriefing" meeting with the Japanese parents involved in the study, several commented that Canadian teachers had advised them to use as much English as possible with their children. Some mothers reported using English with their children in order to encourage their children to acquire English even though they themselves were not comfortable in English.

Home Language

As is clear from the data in Appendix 1, with increasing LOR children's language use in the home goes from unilingual Japanese to bilingual to, in some few cases, unilingual English. According to children's parents, the language preference of younger children (grades 2/3) tends to be either Japanese or English, but not both. For example, for the first two years of stay, 86% of the grade 2 children preferred Japanese, but 100% of those with LOR greater than three years preferred English. Among older children, on

the other hand, language preference is not so clearly marked and more of the children are reported to like both languages.

Discipline

Traditionally Japanese parents are more permissive in the home, compared with most English-speaking families in Canada, in terms of sleeping hours, appearance in public places (children are often taken to parties, restaurants, etc.), and what they are allowed to do in the home; however, much stricter discipline is enforced in the school. One mother mentioned that she felt stronger responsibility here because of the lack of discipline in the school and also the lack of help from outside the family, such as grandparents, relatives, and others, in reinforcing discipline. One mother commented that she is happy about the fact that she can discipline her children as she likes without outside interference, like grandparents, neighbours, relatives, etc. Some mothers found it difficult to give discipline because of the lessened authority of the mother due to language handicaps. The following are some of the main areas of concern:

Language. Many parents (14) commented on children's lack of facility in using appropriate forms in a given situation, such as greetings, proper level of politeness, and especially the speech used when talking to non-family members (formal speech vs. informal speech).

Manners. Several parents (7) pointed out that they are particularly strict in correcting aspects of their children's manners which are typically non-Japanese but accepted in Canadian schools, e.g. the way of sitting, table manners, guest manners.

Values. Typically Japanese values were reflected in the mothers' responses in the questionnaire. One mother said that she tried to point out the cultural differences to her children and instructed them not to absorb Canadian culture without proper appreciation, or criticism. Although many mothers enjoy the life here, they wish their children to have Japanese values and not to lose the strong points of the national character.

Some of the parents' comments are as follows:

- I want my child not to be a nuisance to others
- I want my child to do what he is supposed to do
- I want my child to be considerate to others
- I want my child to be a person who does what he is supposed to do before being told by others to do so
- I want my child to be able to give proper judgement of the good from the bad
- I want my daughters to be girl-like girls

The majority of the parents are now aware of the fact that cultural values represent a potentially dangerous area where conflict between parent and children might arise because children are acquiring a new set of values in addition to a new language.

APPENDIX 7

LANGUAGE LEARNING ATTITUDES AND EXPERIENCES OF ONE JAPANESE FAMILY

(derived from the parent and student interviews)

Interview with the Mother

Both parents hold master's degrees and lived in the United States for four years before coming to Canada. The mother worked as a simultaneous interpreter in the United States and attributes her sensitivity to her children's language partially to this experience.

The older child (grade 5) was born in the United States and according to the mother has considerable problems both in Japanese oral expression and reading. Both children prefer English to Japanese but the parents' language policy is to speak only Japanese at home. The older child spends five hours a week studying Japanese at home and the younger child (grade 3) somewhat less.

According to the mother both children are outgoing but the older child is more nervous than the younger child. The children watch about 30 minutes of TV per day, the program being one which is considered suitable by the mother.

The family's life-style changed considerably after moving to Canada. The father had more time to spend with his family and the children were reared somewhat differently from the way they would have been in Japan. In some respects child-rearing practices were stricter, in other respects more relaxed than would have been the case in Japan. The mother tries to keep the following considerations in mind in rearing the children:

(a) good etiquette (e.g. greetings or bowing)
(b) self-reliance (e.g. keeping room tidy)
(c) healthy life-style
(d) cultural sensitivity and critical thinking (e.g. the parents try to make the children sensitive to existing prejudices of and towards different cultural groups)

The mother wants to remain in Canada because of the relatively high status accorded to women in Canada as compared to Japan and the fact that she feels it is possible to pursue education of the whole person here. The family returns to Japan about once every three years (for approximately a month) courtesy of the company for which the father works.

The good points she sees in Canadian schools are that there is no excessive competition and, at least in the younger child's private school, importance is attached to developing the individual creativity of the child. On the negative side, the curriculum is less systematic with respect to the development of basic skills and parents and teachers are sometimes less involved in their children's education than in Japan. There is also less emphasis on appropriate consideration towards others in the Canadian school.

The mother offered the following advice regarding education and living in general to Japanese families who come to Canada:

> "The educational standard of Canadian schools is quite high so I recommend helping the child to adapt to the school as rapidly as possible and encouraging him/her to get good marks. Furthermore, I suggest encouraging the child to take advantage of the educational opportunities in Canada which are not available in Japan (e.g. contact with different cultures and acquisition of foreign languages."

> "With regard to general living, I recommend taking advantage of the chance to live outside of Japan by intensively absorbing other cultures and attempting to form an international personality with flexible attitudes by looking at both ourselves and Japan from others' point of view."

Interviews with Children

Both children performed well on the English and Japanese academic tasks. The older child scored 60 (i.e. one SD above mean) on the Japanese standardized measure and the younger child 54. It is clear that the mother's perception of the older child's reading difficulties in Japanese reflects her high standards. On most of the English academic tasks sibling differences in favor of the older child were slight and performance was high:

English Vocabulary	45 (G5)	v.	40	(G3)
English Reading	39	v.	38	
Prepositions	12	v.	08	
Antonyms	19	v.	17	
Sentence Repetition	133	v.	135	

The older child prefers English to Japanese and feels some difficulty in speaking Japanese: "Sometimes I don't know how to express something important to my mother even though I can say it in English." She prefers to read English books because they are less difficult for her. She wants to stay in Canada because she feels she can't speak Japanese well enough and because she has many friends in Canada.

The following exchange during the English interview clearly illustrates her preference in relation to country of residence:

Interviewer (I): Would you like to go back and see Japan again?
Child (C): (emphatically) Well, for a visit! (undertone) I never want to go back.
I: Do you think that your family will move back?
C: Well, my dad will have to eventually but my mom says she's trying to put up a little resistance. (undertone) I don't want to go back.

The younger child also prefers English to Japanese and experiences similar difficulties in Japanese to those expressed by her sister: "Even though I know how to express myself in English, I sometimes have difficulty in Japanese speaking and writing." Her favorite subjects at Canadian school are Math, Language and Science. She rarely watches TV at home since her mother doesn't allow her to watch any adults' programs and only some good children's programs.

She likes to read Japanese books better than English because she has many of them at home but only a few English books. She wants to go back to Japan to go to school in spite of her awareness of its "bad" reputation (hard study and competitiveness). One reason she raised was the difference

in field trips between Japan and Canada:

> "I particularly want to go on an excursion in the Japanese way. In Canada we go only to places where my mother can take me by bus, but I've heard that in Japan we can go to new places where my mother can't take me by bus..."

Although she had some trivial problems of pronunciation, Japanese speech seemed quite fluent.

Relationship Between Native and Second Language Reading Comprehension and Second Language Oral Ability

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